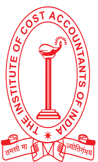
CMA STUDENT E-Bulletin

VOL 10 | NO. 02 | FEBRUARY 2025

An Initiative of Directorate of Studies



ICMAI
THE INSTITUTE OF COST ACCOUNTANTS OF INDIA
Statutory Body under an Act of Parliament
www.icmai.in

About the Institute

The Institute of Cost Accountants of India (ICMAI) is a statutory body set up under an Act of Parliament in the year 1959. The Institute as a part of its obligation, regulates the profession of Cost and Management Accountancy, enrols students for its courses, provides coaching facilities to the students, organizes professional development programmes for the members and undertakes research programmes in the field of Cost and Management Accountancy. The Institute pursues the vision of cost competitiveness, cost management, efficient use of resources and structured approach to cost accounting as the key drivers of the profession. In today's world, the profession of conventional accounting and auditing has taken a back seat and cost and management accountants increasingly contributing towards the management of scarce resources like funds, land and apply strategic decisions. This has opened up further scope and tremendous opportunities for cost accountants in India and abroad.

The Institute is headquartered in Kolkata having four Regional Councils at Kolkata, Delhi, Mumbai and Chennai, 117 Chapters in India and 11 Overseas Centres. The Institute is the largest Cost & Management Accounting body in the world with about 1,00,000 qualified CMAs and over 5,00,000 students pursuing the CMA Course. The Institute is a founder member of International Federation of Accountants (IFAC), Confederation of Asian and Pacific Accountants (CAPA) and South Asian Federation of Accountants (SAFA). The Institute is also an Associate Member of ASEAN Federation of Accountants (AFA) and member in the Council of International Integrated Reporting Council (IIRC), UK.

Vision Statement

"The Institute of Cost Accountants of India would be the preferred source of resources and professionals for the financial leadership of enterprises globally."

Mission Statement

"The CMA Professionals would ethically drive enterprises globally by creating value to stakeholders in the socio-economic context through competencies drawn from the integration of strategy, management and accounting."

Institute Motto

असतोमा सद्गमय	From ignorance, lead me to truth
तमसोमा ज्योतिर् गमय	From darkness, lead me to light
मृत्योर्मामृतं गमय	From death, lead me to immortality
ॐ शान्ति शान्ति शान्तिः	Peace, Peace, Peace

Disclaimer:

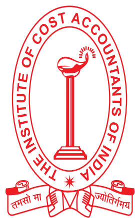
Copyright of this CMA Student E-Bulletin is reserved by the Institute of Cost Accountants of India and prior permission from the Institute is necessary for reproduction of the whole or any part thereof. The write ups published in good faith on the basis of declaration furnished by the authors.

Copyright © 2025 by The Institute of Cost Accountants of India

CMA STUDENT E-Bulletin

VOL 10 | NO. 02 | FEBRUARY 2025

An Initiative of Directorate of Studies



ICMAI
THE INSTITUTE OF COST ACCOUNTANTS OF INDIA
Statutory Body under an Act of Parliament
www.icmai.in

CONTENTS

CMA STUDENT E-Bulletin
VOL 10 I NO. 02 I FEBRUARY 2025

Chief Patron
CMA Bibhuti Bhusan Nayak, President, ICMAI

Patron
CMA T.C.A. Srinivasa Prasad, Vice President, ICMAI

Editorial Board Members
CMA Vinayaranjan P.
CMA Ashwin G Dalwadi
CMA Neeraj Dhananjay Joshi
CMA (Dr.) Ashish P. Thatte
CMA Manoj Kumar Anand
CMA Avijit Goswami
CMA (Dr.) V. Murali

Chief Editor
CMA (Dr.) Debaprosanna Nandy
Secretary (Officiating)

Managing Editor
CMA (Dr.) Debaprosanna Nandy, Secretary
Training & Educational Facilities Committee

Editorial Team
CMA Avijit Mondal, Joint Director (Studies)
CMA Samarpita Ghosal, Assistant Director (Studies)
CMA Susmita Ghosh, Sr. Officer (Studies)

Editorial Office
The Institute of Cost Accountants of India
CMA Bhawan
12, Sudder Street, KolKata - 700016
studies.ebulletin@icmai.in

06 - Chairman's Communique
(Training & Educational Facilities Committee)

07 - 26 - CMA Foundation Course
Syllabus 2022
(Paper 1 - 4)

27 - 76 - CMA Intermediate Course
Syllabus 2022
Group I (Paper 5 - 8) & Group II (Paper 9 - 12)

77 - 123 - CMA Final Course
Syllabus 2022
Group III (Paper 13-16) & Group IV (Paper 17-19)
Electives (Paper 20A - 20C)

CHAIRMAN'S COMMUNIQUE

Dear CMA Students,

It gives me immense pleasure to connect with you through the February 2025 issue of the CMA Student E-Bulletin. As the Chairman of the Training & Educational Facilities Committee of ICMAI, I am excited to share the latest developments and initiatives that aim to enhance your learning experience and professional growth.

At ICMAI, our commitment to excellence in education and training remains unwavering. We continuously strive to provide you with the best resources, state-of-the-art facilities, and cutting-edge training programs that will prepare you to excel in the field of cost and management accounting. Your success is our primary motivation, and we are dedicated to supporting you every step of the way.

In today's digital age, leveraging technology to facilitate learning is paramount. We have introduced several innovative learning platforms to ensure that you have access to high-quality education regardless of your location. Our online classes, interactive webinars, and virtual workshops provide you with the flexibility to learn at your own pace while maintaining the highest standards of education.

In addition to theoretical knowledge, practical skills are crucial for your professional development. We have designed a variety of skill development programs that focus on real-world applications and industry-relevant practices. These programs include case studies, simulation exercises, and hands-on training sessions that bridge the gap between academic knowledge and practical implementation.

Our collaborations with leading organizations and industry experts provide you with invaluable insights and opportunities to apply your knowledge in real-world scenarios. Through internships, live projects, and guest lectures, you can gain practical experience and understand the nuances of the industry. These collaborations also open doors to networking opportunities that can be instrumental in your career growth.

At ICMAI, we believe in the holistic development of our students. Alongside academic excellence, we emphasize the importance of soft skills such as communication, leadership, and teamwork. Our comprehensive training programs include workshops and seminars focused on developing these essential skills, ensuring that you are well-rounded professionals ready to take on leadership roles.

I am confident that the initiatives and programs we have implemented will significantly enhance your learning experience and prepare you for a successful career. I encourage you to take full advantage of these opportunities and remain dedicated to your goals.

I extend my best wishes to all of you. Your hard work, determination, and passion are the driving forces behind our efforts. Let us continue to work together to achieve excellence and elevate the standards of the cost and management accounting profession.

Warm regards,

CMA Vinayranjan P.

Chairman, Training & Educational Facilities Committee, ICMAI

CMA FOUNDATION COURSE

Syllabus 2022

Topic

Fundamentals of Business Laws -

Module 2: Indian Contracts Act, 1872

Business Communication -

Module 5: Business Communication

FOUNDATION

Paper-1

Fundamentals of Business Laws and Business Communication (FBLC)

SECTION – A: FUNDAMENTALS OF BUSINESS LAWS

MULTIPLE CHOICE QUESTIONS (MCQ)

1. Contract defined in section
   (a) 2(h)
   (b) 2(m)
   (c) 2(k)
   (d) 2(a)
2. The difference between an advertisement for sale and a proposal is
   (a) No difference at all
   (b) That a proposal becomes a promise as soon as the party to whom it is made accepts it but an advertisement does not
   (c) Every case will be viewed according to the circumstances
   (d) None of these
3. In a Book depot a catalogue of books enlisting the price of each book and specifying the place where the particular book is available is
   (a) An invitation to offer
   (b) An offer
   (c) An invitation to visit the book shop
   (d) None of these
4. A catalogue of the goods of a company for sale a series of offers but only an invitation for offers.
   (a) Is
   (b) Is not
   (c) In normal cases is
   (d) In normal cases is not
5. Essential Elements of an offer -
   (a) It must be Communicated
   (b) It must be Clear and definite
   (c) It must create Legal Relationship
   (d) All
6. A telephonic acceptance is complete when the offer is
   (a) spoken into the telephone
   (b) heard but not understood by the Offeror
   (c) heard and understood by the Offeror
   (d) is received, heard and understood by some person in the offeror's house
7. With regard to the contractual capacity of a person of unsound mind, which one of the following statements is most appropriate?
   (a) A person of unsound mind can never enter into a contract
   (b) A person of unsound mind can enter into a contract
   (c) A person who is usually of unsound mind can contract when he is, at the time of entering into a contract, of sound mind
   (d) A person who is occasionally of unsound mind can contract although at the time of making the contract, he is of unsound mind
8. While obtaining the consent of the promisee, keeping silence by the promisor when he has a duty to speak about the material facts, amounts to consent obtained by:
   (a) Coercion
   (b) Misrepresentation
   (c) Mistake
   (d) Fraud
9. 'Arun' threatened to commit suicide if his wife, Radhika did not execute a sale deed in favour of this brother, Barun. Radhika executed the sale deed. This transaction is:
   (a) Voidable due to under influence
   (b) Voidable due to coercion
   (c) Void being immoral
   (d) Void being forbidden by law
10. A contract which is vitiated by undue influence is declared as which one of the following by the Indian Contract Act?
   (a) Invalid
   (b) Void
   (c) Illegal
   (d) Voidable

11. Indian Contract Act introduced in the year
    (a) 1881
    (b) 1857
    (c) 1872
    (d) 1956
12. Factors vitiating consent are:
    (a) Coercion, Undue influence
    (b) Fraud, Misrepresentation
    (c) Mistake
    (d) All of these
13. Misrepresentation means:
    (a) Unwarranted assertion
    (b) Any breach of duty without an intent to deceive
    (c) Innocent mistake
    (d) All the above
14. If a party stands in a fiduciary relation to the other:
    (a) He cannot dominate
    (b) He can dominate the will of another
    (c)The trust should be maintained
    (d) None of these
15. A person is deemed to be in a position to dominate the will of another if he:
    (a) Holds real or apparent authority
    (b) Stands in a fiduciary relationship
    (c) Both (a) and (b)
    (d) Either (a) or (b)
16. If both the parties to a contract believe in the existence of a subject, which in fact does not exist, the agreement would be
    (a) Unenforceable
    (b) Void
    (c) Voidable
    (d) None of these
17. For a valid contract
    (a) Both the parties should have given their consent
    (b) The consent should be free
    (c) Both (a) and (b)
    (d) Either (a) or (b)
18. When both the parties to an agreement are under a mistake as to a matter of fact essential to an agreement, the agreement is:
    (a) Void
    (b) Valid
    (c) Voidable
    (d) Illegal
19. In Indian Contract Act, the term consensus ad idem means
    (a) Parties under a mistake
    (b) Parties under the free consent
    (c) Parties agreeing upon the same thing in same sense
    (d) None of these
20. To prove undue influence, the applicant plaintiff has to prove that:
    (a) The relations, subsisting between the parties are such that the defendant was in a position to dominate the will of the plaintiff
    (b) The defendant used that position to obtain an unfair advantage from the plaintiff
    (c) Both (a) and (b)
    (d) None of these
21. The validity of contract is not affected by
    (a) Mistake of fact
    (b) Mistake of Indian law
    (c) Misrepresentation
    (d) Fraud
22. Unlawful agreements comprise
    (a) Illegal agreements
    (b) Immoral agreements only
    (c) Agreements opposed to public policy only
    (d) All the agreements mentioned above

23. The section 2(a) of the Contract Act defined-

    (a) Offer

    (b) Acceptance

    (c) Contract

    (d) Agreement

24. A contract to trade with an enemy is

    (a) an immoral agreement

    (b) a valid agreement

    (c) an agreement opposed to public policy

    (d) an enforceable agreement

SECTION – B: BUSINESS COMMUNICATION

25. If a message is short and to the point, the message is said to be .

    (a) Correct

    (b) Concise

    (c) Coherent

    (d) Complete

26. The way the information is described or translated into a message and put in verbal or non-verbal medium is called .

    (a) Feedback

    (b) Decoding

    (c) Encoding

    (d) None of the above

27. Affirming comments with regard to future behaviour is called .

    (a) Positive Feedback

    (b) Negative Feed forward

    (c) Positive Feed forward

    (d) Decoding

28. Corrective comments with regard to past behaviour-

    (a) Encoding

    (b) Positive Feedback

    (c) Negative Feed forward

    (d) Negative Feedback

29. Interpretation and conversion of information communicated in to the intelligible form so that the recipient can fully understand the true meaning of the information is called .

    (a) Decoding

    (b) Encoding

    (c) Feedback

    (d) None of the above

30. What is the initial step of communication process?

    (a) Developing an idea

    (b) Transmitting

    (c) Decoding

    (d) Encoding

Answer:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
a	b	c	b	d	c	c	d	b	d	c	d	d	b	c
16	17	18	19	20	21	22	23	24						
b	c	a	c	c	b	d	a	c						

25	26	27	28	29	30
b	c	c	c	a	a

Topic

Fundamentals of Financial Accounting -

Module 1: Accounting Fundamentals

Fundamentals of Cost Accounting -

Module 4: Fundamentals of Cost Accounting

FOUNDATION

Paper-2

Fundamentals of Financial and Cost Accounting (FFCA)

In the following MCQs , only one answer is correct. Find out the same.

1. A Trial Balance is –
   (a) Balance Sheet of Business
   (b) List of balances in the Ledger
   (c) Statement prepared under trial and error method
   (d) Arithmetical accuracy statement
2. What is the nature of Suspense Account ?
   (a) Real Account
   (b) Personal Account
   (c) Nominal Account
   (d) None of the above
3. If ₹500 worth of Discount received debited in Discount Account, Trial Balance will be impacted by
   (a) ₹500
   (b) ₹1,000
   (c) ₹1,500
   (d) ₹250
4. Cheque amounting ₹30000 received from Ashok, credited in Alok Account, impact is
   (a) Profit increased by ₹30,000
   (b) Profit reduced by ₹30,000
   (c) No effect on Profit
   (d) Asset value will increase by ₹30,000
5. Capital Expenditure is included in
   A. Balance Sheet
   B. Trial Balance
   C. Profit and Loss Account
   D. None of the above
6. Prepaid Expenses of the Business is shown as
   A. Assets
   B. Liabilities
   C. Income
   D. Expenditure
7. Interest on Drawings is
   A. Expense for the Business
   B. Gain for the Business
   C. Loss for the Business
   D. None of the above
8. Sales Day Book includes all
   A. Cash Sales
   B. Credit Sales
   C. Sales Return
   D. Sales at Discount
9. Transportation expense amounting ₹10,000 on bringing the New Machinery to Plant will be
   A. Debited to Machinery Account
   B. Debited to Cash Account
   C. Debited to Transportation Account
   D. Debited to Transporter Account
10. Which one is both Journal and Ledger
    A. Journal Proper
    B. Cash Book
    C. Trial Balance
    D. Subsidiary Books
11. Errors are rectified through
    A. Journal Proper
    B. Cash Book
    C. Suspense Account
    D. Trial Balance
12. On which amount Provision for discount on Debtors is created
    A. Debtors
    B. Debtors less Bad Debt
    C. Debtors less provision for doubtful debts
    D. Debtors less discount
13. Which of the following does not depreciate?
    A. Mechinary
    B. Patents
    C. Land
    D. Building

14. Which of the following errors affect two or more accounts?

    A. Errors of complete ommission

    B. Errors of principle

    C. Errors of posting to wrong account

    D. All of the above

15. Bad Debt recovery is credited to

    A. Bad Debt Account

    B. Provision for Bad Debt Account

    C. Profit & Loss A/C

    D. None of the above

16. Which accounting convention considers, ‘anticipated losses to be considered but not Profit’

    A. Materiality

    B. Conservatism

    C. Consistency

    D. None of the above

17. Who is responsible for preparing a Bank Reconciliation Statement?

    A. Accountant

    B. Book-keeper

    C. Treasurer

    D. Auditor

18. Which of the following is not a part of financial statement?

    A. Profit and Loss Account

    B. Balance Sheet

    C. Trial Balance

    D. Cash Flow Statement

19. Registration fees paid for the new Asset acquired , is to be

    A. Capitalized

    B. Charge to Revenue Expense

    C. Deffered Revenue expense

    D. Adjusted with sale value

20. Income Expenditure Account is prepared to ascertain

    A. Surplus or Deficit

    B. Cash requirement

    C. Distribution of Profit

    D. None of the above

21. Income and Expenditure Account belong to

    A. Real A/C

    B. Nominal A/C

    C. Suspense A/C

    D. Personal A/C

22. Which of the following costs would be included in the cost of a job?

    A. Direct Materials, Direct Labour, and Overhead

    B. Direct Materials, Direct Labour, and Selling Expenses

    C. Direct Materials, Overhead, and Administrative Expenses

    D. Direct Labour, Overhead, and Research and Development Expenses

23. What is the difference between Job Costing and Process Costing?

    A. Job Costing is used for manufacturing, while Process Costing is used for services

    B. Job Costing is used for services, while Process Costing is used for manufacturing

    C. Job Costing is used for unique products, while Process Costing is used for mass-produced products

    D. Job Costing is used for mass-produced products, while Process Costing is used for unique products

24. Which of the following is an example of a Cost Driver?

    A. Number of units produced

    B. Number of customers served

    C. Number of employees

    D. All of the above

25. Which of the following costs would be included in the cost of a batch?
    A. Direct Materials, Direct Labour, and Overhead
    B. Direct Materials, Direct Labour, and Selling Expenses
    C. Direct Materials, Overhead, and Administrative Expenses
    D. Direct Labour, Overhead, and Research and Development Expenses

26. What is the difference between Batch Costing and Job Costing?
    A. Batch Costing is used for unique products, while Job Costing is used for mass-produced products
    B. Batch Costing is used for mass-produced products, while Job Costing is used for unique products
    C. Batch Costing is used for services, while Job Costing is used for manufacturing
    D. Batch Costing is used for manufacturing, while Job Costing is used for services

27. Which of the following costs would be included in the cost of a product under Absorption Costing?
    A. Direct Materials, Direct Labour, and Variable Overhead
    B. Direct Materials, Direct Labour, Variable Overhead, and Fixed Overhead
    C. Direct Materials, Direct Labour, and Fixed Overhead
    D. Direct Materials, Variable Overhead, and Fixed Overhead

28. What is the difference between Operating Costing and Job Costing?
    A. Operating Costing focuses on specific operations or activities, while Job Costing focuses on specific jobs or projects
    B. Operating Costing focuses on specific jobs or projects, while Job Costing focuses on specific operations or activities
    C. Operating Costing focuses on specific departments or functions, while Job Costing focuses on specific jobs or projects
    D. Operating Costing focuses on specific products or services, while Job Costing focuses on specific jobs or projects

29. Which of the following is an example of an Environmental Cost Driver?
    A. Number of units produced
    B. Number of customers served
    C. Economic conditions
    D. Government regulations

30. Which of the following is the main objective of Cost Accounting Standards?
    A. To provide a framework for financial reporting
    B. To provide a framework for cost accounting and reporting
    C. To provide a framework for auditing
    D. To provide a framework for taxation

Answer:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
b	b	b	c	a	a	b	b	a	b	a	c	c	d	d
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
b	b	c	a	a	b	a	c	d	a	b	b	a	d	b

Topic

Fundamentals of Business Mathematics -

Module 1: Arithmetic

Fundamentals of Business Statistics

Module 5: Measures of Central Tendency and Dispersion

FOUNDATION

Paper-3

Fundamentals of Business Mathematics and Statistics (FBMS)

In this issue we will carry out MCQs on Arithmetic and Measures of Central Tendency & Dispersion – refer Module 1 and Module 5 of Study guide.

1. Find the value of common ratio for the series: 840, 420, 210, and 105

(a) 2

(b) 1/2

(c) -2

(d) 1/4

2. Find the Value of common difference for the series: 22, 19, 16, 13, 10, 7, 4

(a) 3

(b) 4

(c) -3

(d) -4

3. Find the value of the first term for: …... 108, 110, 112, 114, and 116 for the series having 51 terms.

(a) 16

(b) 18

(c) 15

(d) 17

4. If a Stadium having spectators are divided into groups: Young Generation and Old Generation. The number of young spectators are 1525 and old spectators are 1875. Find the ratio of Young Spectators to Total Spectators.

(a) 136: 75

(b) 75: 136

(c) 61: 75

(d) 136:61

5. Find two numbers whose mean proportional is 8 and the 1st number is square of the 2nd number.

(a) 8, 8

(b) 4, 2

(c) 16, 4

(d) 64, 8

6. What number must be subtracted to each of the numbers 12, 13, 24 and 29 to make them proportional?

(a) 36

(b) 38

(c) 35

(d) 34

7. The ratio of the pocket money saved by Rakesh and his sister is 5:6. If the sister saves R60 more, how much more the brother should save in order to keep the ratio of their savings unchanged?

(a) 60

(b) 40

(c) 50

(d) 70

8. If a, b & c are in continued proportion then we could write

(a) $a : c = a^2 : b^2$

(b) $a = bc$

(c) $ab = bc$

(d) $a^2 + b^2 + c^2 = 1$

9. In a fraction a/c

(a) The numerator α is called the antecedent of the ratio and denominator b is called the consequent of the ratio

(b) The numerator α is called the consequent of the ratio and denominator b is called the antecedent of the ratio

(c) The antecedent α is called the numerator of the ratio and consequent b is called the denominator of the ratio

(d) The consequent α is called the numerator of the ratio and antecedent b is called the denominator of the ratio

10. With two given ratios a:b and c:d

(a) ab : cd is said to be compounded of the two given ratios

(b) ac : bd is said to be compounded of the two given ratios

(c) b : ad is said to be compounded of the two given ratios

(d) ad : bc is said to be compounded of the two given ratios

11. If a Bike travels for 8 hours and covers 172 km on a working day and on a holiday it takes 6 hours to cover 1.25 times the distance covered on working day. For a span of 5 days: 3 Working and 2 Holidays, how much distance is covered?

(a) 998 km

(b) 989 km

(c) 964 km

(d) 946 km

12. If you get R10000 p.a from a bank for 12 years for a deposit of R71607.25 today, then interest rate offered by the bank is

(a) 8% p.a

(b) 9%p.a

(c) 10%p.a

(d) 11%p.a

13. What is the Standard deviation of 5, 5, 9, 9, 9, 9, 10 5, 10, 10?

(a) 14

(b) 42

(c) 50

(d) 8

14. If x and y are related by y = 2x + 5 and the Standard deviation and AM of x are known to be 5 and10 respectively, then the coefficient of variation is

(a) 25

(b) 30

(c) 40

(d) 20

15. What is the Mean deviation about median for the following data?

X	3	5	7	9	11	13	15
f	2	8	9	16	14	7	4

(a) 2.50

(b) 2.46

(c) 2.43

(d) 2.37

16. If the first and third quartiles are 22.16 and 56.36, then the quartile deviation is:

(a) 17.1

(b) 34.2

(c) 51.3

(d) 43.2

17. What is the value of Mean deviation about mean for the following observations: 50, 60, 50, 50, 60, 60, 60, 50, 50, 60, 60, 60, and 50?

(a) 5

(b) 7

(c) 35

(d) 10

18. The median of the numbers 11, 10, 12, 13, 9 is

(a) 12.5

(b) 12

(c) 10.5

(d) 11

19. $\overline{X}$ = 50, σ = 25; the C.V. is

(a) 200%

(b) 25%

(c) 50%

(d) 100%

20. If median = 12, Q1 = 6, Q3 = 22 then the coefficient of quartile deviation is

(a) 33.33

(b) 60

(c) 66.67

(d) 70

21. 25% of the items of a data are less than 35 and 25% of the items are more than 75. Q.D. of the data is

(a) 55

(b) 20

(c) 35

(d) 75

22. Following are the marks of 10 students: 82, 79, 56, 70, 85, 95, 55, 72, 70 and 66. Find coefficient of range

(a) 25.66

(b) 26.67

(c) 27.66

(d) 28.67

23. Following are the wages of 8 workers expressed in rupees: 82, 96, 52, 75, 70, 65, 50 and 70. Find the range and its coefficient.

(a) 52, 85.25

(b) 70, 35.27

(c) 39, 33.52

(d) 46, 31.51

24. If each item is reduced by 10, the range is

(a) Increased by 10

(b) Decreased by 10

(c) Unchanged

(d) None

25. Coefficient of variation is calculated by the formula

(a) $\frac{\sigma}{\overline{X}}$ *100

(b) $\frac{\overline{X}}{\sigma}$ *100

(c) $\frac{\sigma}{\overline{X}}$

(d) $\frac{\sigma}{\overline{X}}$ *1000

26. In a normal $\overline{X} \pm 3\sigma$ distribution covers.

(a) 99.73% items

(b) 99.25% items

(c) 99.9% items

(d) None of these

27. Graphic method of calculating dispersion is

(a) Lorenz curve

(b) Mean Deviation

(c) Quartile

(d) Range

28. For which measure of dispersion ± signs are ignored:

(a) Standard deviation

(b) Quartile Deviation

(c) Range

(d) Mean deviation

29. To measure the deviations of an open end series the suitable measure of dispersion is

(a) Quartile deviation

(b) Mean Deviation

(c) Standard Deviation

(d) None of these

30. The quartile deviation includes

(a) Last 50%

(b) Middle 50%

(c) First 50%

(d) None of these

Answer Keys:

1	b	
2	c	
3	a	Value of the 1st Term for : ….., 108, 110, 112, 114, 116 Having 51 terms in the series 'd' = n term – (n-1) term = 116 – 114 = 2 An = a+(n-1)*d 116 = a+ (51-1)*2 or, 116 = a + 50*2 or, 116 = a + 100 or, a = 116-100 = 16

4	d	Young Spectators – 1525, Old Spectators – 1875, Total strength of the stadium : Young Spectators + Old Spectators Total strength: (1525 + 1875) = 3400 spectators. Ratio of Total Strength to Young Spectators : 3400 : 1525 = 136 : 61
5	c	Mean proportional is 8 1st number is square of 2nd number, Let two numbers be x^2 and x, Mean proportional = $\sqrt{(x \times x^2)}$ $8 = \sqrt{x^3}$ $8^2 = (\sqrt{x^3})^2$ $64 = x^3$ $4^3 = x^3$ x = 4 $x^2 = 16$ Two numbers are 16 and 4.
6	a	Number must be subtracted to 12, 13, 24 and 29 to make them proportional be y, (12 - y) : (13 - y) : : (24 - y) : (29 - y) (12 - y) * (29 - y) = (24 - y) * (13 - y) $348 - 12y - 26y + y^2 = 312 - 24y - 13y + y^2$ $348 - 38y + y^2 = 312 - 37y + y^2$ 38y - 37y = 348 - 312 y = 36
7	c	Let the savings of Rakesh to his sister be 5x and 6x, And Rakesh would save ₹ y more, (5x + y) / (6x + 60) = 5/6 (5x + y) × 6 = 5 × (6x+60) 30x + 6y = 30x + 300 6y = 300 Y = 300/6 = 50
8	a	$\frac{a}{b} = \frac{b}{c}$ Or, $\frac{a}{c} = \frac{a}{b}$ Or, $\frac{a}{c} = \frac{a}{b} \times \frac{a}{b}$ Or, $a : c = a^2 : b^2$
9	a	
10	b	

11	d	Bike travels for 8 hours and covers 172 km on a working day and on a holiday it takes 6 hours to cover 1.25 times the distance covered on working day. Working Day – 172 km Holiday – 172*1.25 = 215 km For a span of 5 days : 3 Working and 2 Holidays Distance = 172*3 + 215*2 = 516 + 430 = 946 km
12	b	71607.25 = 10000 * PVIFA (r, 12); Hence r = 9%

13	b	19	c	25	a
14	a	20	c	26	a
15	d	21	b	27	a
16	a	22	b	28	d
17	a	23	d	29	a
18	d	24	c	30	b

Suggestions:

The study guide needs to be revised thoroughly. Supplementary readings could be made from other resources. In this issue MCQs are based on basic concepts developed in the respective modules/sub modules of the study guide. Students should try to solve individual questions with concepts developed from guide book to understand the correct answer of each question. Formula used here are all covered in study guide. Brief solutions on selected problems in arithmetic section are given as keys.

VOL 10 | NO. 02

Topic

Fundamentals of Business Economics -

Fundamentals of Management -

Module 5: Fundamentals of Management

FOUNDATION

Paper-4

Fundamentals of Business Economics and Management (FBEM)

TIPS ON BUSINESS ECONOMICS AND MANAGEMENT FOR THE MONTH OF FEBRUARY 2025

"License regime" required permits for just about anything, until the licenses became more important than the underlying products or services that were permitted – height of lunacy on the part of Indian administration.

While Nehru's economic and agricultural policies were an unmitigated disaster, he was more successful helping to create world class institutes, including the Indian Institute of Management and Indian Institute of Technology. These have been instrumental in creating a generation of talented professors, engineers and entrepreneurs who have been the front runners of India's economic revolution. Many of them have also played leading roles in the United States in Silicon Valley.

It is worthwhile to note that at roughly the same time in history, China was going through a much more brutal type of economic and social engineering. Chairman Mao Tse-Dong took the Chinese people through the Cultural Revolution, which decimated almost every aspect of Chinese society and economy and resulted in the deaths of an estimated 30 million people from malnutrition and forced labour. (to be continued).

Let us start our usual exercise of mock test.

Chose the correct answer:

1. Who was the proponent of the scarcity definition of economics?

   A. Marshall

   B. Robbins

   C. Samuelson

   D. Schumpeter

2. Production possibility curve is

   A. Concave to the origin

   B. Convex to the origin

   C. Both A and B

   D. None of the above

3. The slope of PPC at any given point is called

   A. Marginal rate of utility

   B. Marginal rate of productivity

   C. Marginal rate of transformation

   D. None of the above

4. If there is conspicuous consumption of a product, the demand curve will be

   A. Negatively sloped

   B. Positively sloped

   C. Horizontal

   D. Vertical

5. Movement along any demand curve shows

   A. Change in demand

   B. Change in quantity demanded

   C. Contraction in demand

   D. All of them

6. If the income of the consumer rises, other things remaining the same, how the equilibrium price (P) and quantity (Q) for the commodity should change?

   A. P and Q both will rise

B. P rises and Q will fall

C. P falls and Q will rise

D. None of the above

7. If the price of a substitute good rises, the demand curve shifts

A. To the left

B. To the right

C. Upward

D. None of the above

8. An increase in the price of a commodity when demand is inelastic, causes the total expenditure of the consumers on that commodity

A. To rise

B. To fall

C. To remain unchanged

D. None of the above

9. The demand for a commodity which can be put to a variety of uses will be

A. Unitary elastic

B. Relatively inelastic

C. Relatively elastic

D. None of the above

10. The demand for durable goods usually remains

A. Unitary elastic

B. Perfectly elastic

C. Relatively elastic

D. Relatively inelastic

11. For an inferior good, the value of income elasticity of demand is

A. Positive

B. Negative

C. Unity

D. Zero

12. The mid-point of a linear demand curve shows a price elasticity of demand which is

A. Relatively elastic

B. Relatively inelastic

C. Unit elastic

D. Perfectly inelastic

13. When the seller sells the output at a given price per unit, then

A. MR = AR

B. MR > AR

C. MR < AR

D. None of the above

14. When AR is rising, the movement of the MR curve

A. Will be upward

B. Will be downward

C. Will be nil

D. Cannot be predicted

15. The principal goal of a monopoly firm is assumed to be

A. Sales maximization

B. Revenue maximization

C. Profit maximization

D. None of the above

16. At the profit maximizing level of output of a competitive firm

A. P = AVC

B. P > AVC

C. P < AVC

D. P >= AVC

17. The RBI increases the repo rate

A. To control deflation

B. To control inflationary pressure

C. To control the rural banks

D. None of the above

18. Monetary policy means

A. Change in the tax rate of the economy

B. Change in the money supply of the economy

C. Change in the Govt. expenditure of the economy

D. All of the above

19. Which industry flourished during Covid-19 pandemic riddled environment?

A. IT based industries

B. Food processing industries

C. Machine tools industries

D. None of the above

20. The term ‘T’ in SWOT Analysis is

A. Toxicity

B. Transport

C. Threat

D. None of the above

21. In a volatile situation, that organization will grow faster

A. Which can adopt new technology faster

B. Which can do market research

C. Which will appoint efficient managers

D. None of the above

22. The technique for observing the behavior of a system under several alternative conditions in an artificial setting is known as

A. Game theory

B. Probability Decision Theory

C. Simulation

D. Linear programming

23. “Decision making is the selection based on some criteria from two or more possible alternatives”—the proponent of this observation is

A. Farland

B. Mac Donald

C. Terry

D. M.C. Nites

24. The final step in decision making process is

A. Selection of an alternative

B. Developing alternative

C. Evaluation of alternative

D. Implementation and follow up of decision

25. Democratic leadership is also known as
    A. Authoritarian leadership
    B. Free-rein leadership
    C. Laissez Faire leadership
    D. Participative leadership

26. There can be no leadership without
    A. Managers
    B. Subordinates
    C. Followers
    D. Superiors

27. Control function is closely connected to
    A. Planning
    B. Organizing
    C. Co-ordination
    D. All of the above

28. A thirsty person may use body language in order to communicate that he needs a glass of water. This process is called
    A. Medium
    B. Encoding
    C. Decoding
    D. Feedback

29. Which is the primary function of management?
    A. Planning
    B. Organizing
    C. Directing
    D. Controlling

30. The theory which indicates that profit maximization as the main objective is known as
    A. Share holder theory
    B. Agency theory
    C. Stakeholder theory
    D. Stewardship theory

Answer:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
b	a	c	b	b	a	b	a	c	d	b	c	a	d	c
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
d	b	b	a	c	a	c	c	d	d	c	a	b	a	b

So friends!!

Hope you have enjoyed this mock test while solving the intricate problems in Business economics and Management. For Heaven's sake please do not try to consult the key without trying to find out the solution yourself first. Read the study material thoroughly. Because, all the questions will be based on your study material only. Hope these mock tests help you in having a good grasp of the subject.

Wish you all the best in the exam.

CMA INTERMEDIATE COURSE

Syllabus 2022

Topic

Module 5: Indian Partnership Act, 1932

INTERMEDIATE

Group I - Paper-5

Business Laws and Ethics (BLE)

BUSINESS LAWS AND ETHICS

It is expected that you - the students prepare a time-table with the time allotted for each subject and read, write, revise and recapitulate all that you keep on reading. The first important point is that you must read the *Bear Act* and the *Sections* and start asking questions to yourself and find your own answers. Read the Act carefully and try to know the sense of the contents in it.

In this issue we shall deal with Indian Partnership Act 1932 with special reference to dissolutions of partnership firm.

DISSOLUTION OF PARTNERSHIP FIRMS

Indian Partnership Act 1932 makes a distinction between dissolutions of partnership and dissolution of firm, which are given below—

1. **Dissolutions of Partnership:** Dissolution of partnership simply means a change in the relation of the partners. Such a change is usually caused when a firm is reconstituted. The dissolution of partnership may or may not involve the dissolution of a firm. But when a firm is dissolved, it is necessarily involves the dissolution of partnership.
2. **Dissolution of firm:** Dissolution of a firm means the dissolution of partnership between all the partners of firm. It occurs when there is complete breakdown of relationship between all the partners. In such a situation, the business of the firm is completely stopped, its assets are realized, the liabilities paid off and the surplus distributed among the partners according to their share in the property of the firm. Thus the partnership is completely discontinued.

The dissolution of firm may take place either without the order of the Court or by an order of the Court. The circumstances under which such dissolution takes place are shown below:

TYPES OF DISSOLUTION OF FIRM

1. *Without the order (voluntary) of the Court [Sec. 40-43]*

   i. By Mutual Agreement [Sec. 40]

   ii. Compulsory Dissolution [Sec. 41]

   iii. On happening of certain contingencies [Sec. 42]

   iv. By Notice [Sec. 43]

2. *By order of the Court [u/s 44]*

   1. Insanity

   2. Permanent Incapacity

   3. Misconduct

   4. Persistent Breach of Agreement

   5. Transfer of Interest

   6. Perpetual Losses

   7. Any other just and equitable ground

DISSOLUTION WITHOUT THE ORDER OF COURT [SEC. 40-43]

1. **By Mutual Agreement [Sec. 40]**

   A firm may be dissolved,

   1. With the consent of all the partners
   2. In accordance with a contract between the partners. The contract may be express or implied.

2. **Compulsory dissolution [Sec. 41]**

   A firm is automatically dissolved:

   1. If all the partners, or all but one partner, of the firm are declared insolvent.
   2. If some event takes place which makes it unlawful for the business of the firm to be carried on.

3. **Dissolutions on the happening of certain contingencies [Sec. 42]**

   According to Sec. 42 in the absence of contract to the contrary, a firm, will be dissolved on the happening of the following contingencies:

   1. Where the firm is constituted for a fixed term, it is dissolved by the expiry of the fixed term.
   2. On the death of a partner.
   3. On the adjudication of a partner as insolvent.

4. **Dissolution by Notice [Sec. 43]**

   When a partnership is at will, the firm may be dissolve by any partner by giving notice in writing to all the other partners of his intention to dissolve the firm.

DISSOLUTIONS BY AN ORDER OF THE COURT [SEC. 44]

The essential element to be noted here is that only on the suit by a partner, the court will interfere and order the dissolution of a firm on any of the following grounds. u/s 44(a) to 44(g).

1. **By Insanity of a partner [Sec. 44(a)]**

   Insanity or lunacy of a partner does not, as a rule, dissolve the firm. But any partner or the nearest friend of an unbound partner may file a suit asking for dissolution of the partnership on the ground that a partner has become insane or lunatic. If the court is satisfied regarding the permanent incapacity of the lunatic partner to perform his part of the contract, dissolution may be ordered.

2. **By Permanent Incapacity of a partner [Sec. 44(b)]**

   Where a partner becomes permanently incapable of performing his duties as partner on a suit being filed by other partner, the court may order dissolution of the firm. However, incapacity or incapability of partner to perform the contract must be permanent and not temporary. If on medical ground incapacity of a partner is found curable, the Court will not order dissolution.

3. **By Misconduct of a partner [Sec. 44(c)]**

   When a partner is guilty of his conduct which is likely to affect prejudicially the carrying on the business of partnership, it would also be a ground for the other partner to file a suit and get the order for dissolution of partnership. The misconduct must be willful.

4. **By persistent breach of agreement [Sec. 44(d)]**

   A suit for dissolution may be brought about by a partner not guilty of breach of agreement where a partner carefully or persistently commits breach of partnership agreement, relating to the management of the affairs of the firm or the conduct of the business or otherwise so conducts himself in matters relating to the business that it is not reasonably practicable for the other partners to carry on the business in partnership with him, the court will interfere at the instance of any other partner, when his conduct is such that he will destroy the mutual confidence between the partners.

5. **Transfer of Interest [Sec. 44(e)]**

   The court, at the instance of any other partner, may dissolve the firm when a partner has in any way :

   1. Transferred the whole of his interest in a firm to a third party.
   2. Allowed his share to be changed on account of a decree passed by a court towards payment of liabilities of that partner.
   3. Allowed his share to be sold in the recovery of arrears of land revenue.

6. **Perpetual losses [Sec. 44(f)]**

   When the firm is continuously suffering losses and it is apparent that in future also the business cannot be carried on except at a loss, the Court may order for the dissolution of the firm at the instance of any partner.

7. **Any other just and equitable ground [Sec. 44(g)]**

   If on any other ground it can be proved to the satisfaction of the court that it is just and equitable to dissolve the firm, the Court may order dissolution of the firm.

CONSEQUENCES OF DISSOLUTION

The partners are entitled to:

1. Equitable distribution of firm's property
2. Return of premium on premature dissolution
3. Restrain the use of firm's name as property
4. Certain rights where partnership is rescinded for fraud etc. The partners continue to remain liable to third parties for any act done after dissolution if public notice is not given.

Sec. 48, 49 & 55 of the Partnership Act 1932 lay down detailed rules regarding settlements of accounts between the partners. In the absence of any contract to the contrary, all losses including deficiencies of capital must be paid first out of profits, next out of capital and lastly, if necessary by contribution of all partners in their profit sharing ratio.

If however a partner becomes insolvent and is unable to pay the amount due from him, the solvent partners will share such deficiency in the ratio of their capital as on the date of dissolution as per *Garner vs. Murray rule/ decision (1904).*

The partner's liabilities are unlimited. Hence his private assets can also be used for payment of firm's debt. But, the private assets of a partner will be first used for the payment of his private liabilities and the surplus, if any shall be used for payment of firm's liability if necessary. In settling the accounts of a firm after dissolution, goodwill shall, in the absence of a contract to the contrary, be included in the assets of the firm and it can be sold either separately or along with other assets of the firm.

Topic

Module 1: Accounting Fundamentals

INTERMEDIATE

Group I - Paper-6

Financial Accounting (FA)

Capital and Revenue Transactions

Capital and Revenue Transactions

Capital and Revenue Transactions are two fundamental concepts in accounting that distinguish between different types of expenditures and receipts. They help in understanding how different financial activities impact a company's financial statements.

Capital Transactions

Capital Expenditure: These are expenses incurred to acquire or improve fixed assets (e.g., purchasing machinery, buildings, vehicles). Such expenses provide benefits over a long period and are capitalized, i.e., added to the cost of the asset on the balance sheet.

Examples:

- Purchase of land, building, or machinery.
- Installation costs for new equipment.
- Legal fees for purchasing property.

Capital Receipts: These are funds received that either reduce liabilities or increase the owner's equity without impacting the company's profit or loss. They are not generated from the day-to-day business activities.

Examples:

- Sale of fixed assets.
- Issue of shares or debentures.
- Loans received from banks or financial institutions.

Revenue Transactions

Revenue Expenditure: These are the costs incurred in the ordinary course of business to maintain daily operations. These expenses provide benefits for a short term, typically within a single financial year, and are charged to the profit and loss account.

Examples:

- Wages and salaries.
- Rent, utilities, and insurance.
- Repairs and maintenance.

Revenue Receipts: These are incomes generated from the core business activities, typically recurring in nature. They contribute directly to the profit of the business.

Examples:

- Sales revenue from goods and services.
- Interest received on investments.
- Commission received.

Differences between Capital Expenditure and Revenue Expenditure

Criteria	Capital Expenditure	Revenue Expenditure
Nature	Incurred to acquire or improve long-term assets.	Incurred for day-to-day operations.
Purpose	Aimed at increasing earning capacity or extending asset life.	Aimed at maintaining earning capacity and daily functions.
Treatment in Financial Statements	Capitalized and shown as an asset on the balance sheet.	Expensed in the income statement (profit and loss account).
Recurrence	Typically non-recurring, involves large sums.	Recurring, involves regular and smaller amounts.
Impact on Financial Statements	Affects both the balance sheet and income statement through depreciation.	Directly impacts the income statement by reducing profit.
Examples	Purchase of machinery, construction of a building.	Payment of wages, rent, repairs, utilities.
Long-Term vs. Short-Term Impact	Provides long-term benefits, often over several years.	Provides short-term benefits within the current year.
Depreciation	Subject to depreciation over the useful life of the asset.	Not subject to depreciation; fully expensed in the current year.

Impact on Profitability	Initially reduces cash flow but spreads cost over time.	Directly reduces profits in the year incurred.
Example Scenarios	Buying a new factory, installing new equipment.	Routine maintenance, office supplies, utility bills.

Differences between Capital Receipts and Revenue Receipts

Criteria	Capital Receipts	Revenue Receipts
Nature	Non-recurring receipts that affect liabilities or equity.	Recurring receipts from normal business operations.
Source	Derived from non-operational activities like financing.	Generated from operational activities like sales.
Impact on Financial Statements	Recorded on the balance sheet.	Recorded on the income statement (profit and loss account).
Recurrence	Typically non-recurring.	Regular and recurring.
Impact on Capital Structure	Affects capital structure (increases equity or liabilities).	No impact on capital structure.
Examples	Sale of fixed assets, issue of shares, loans received.	Sales revenue, interest earned, commission received.
Long-Term vs. Short-Term Impact	Long-term impact, linked to investment/ financing activities.	Short-term impact, related to current period's earnings.
Repayment or Obligation	May involve future obligations (e.g., loan repayment).	No repayment obligation.
Tax Treatment	May not be taxable, subject to specific rules.	Fully taxable as business income.
Example Scenarios	Selling land, borrowing from a bank, issuing shares.	Income from sales, interest on deposits, rent received.

Adjustment Entries and Rectification of Errors

Adjustment Entries

Adjustment entries are made at the end of an accounting period to update the accounts before financial statements are prepared. They ensure that revenues and expenses are recorded in the period they occur, regardless of when the cash is received or paid.

Key Types of Adjustment Entries:

1. **Accrued Revenues:** Revenue earned but not yet received or recorded.
   - **Example:** Interest receivable.
2. **Accrued Expenses:** Expenses incurred but not yet paid or recorded.
   - **Example:** Salaries payable.
3. **Prepaid Expenses:** Payments made in advance for expenses that have not yet been incurred.
   - **Example:** Prepaid rent.
4. **Unearned Revenues:** Cash received before revenue is earned.
   - **Example:** Advance payments from customers.
5. **Depreciation:** Allocation of the cost of a tangible fixed asset over its useful life.
   - **Example:** Depreciation on machinery.

Rectification of Errors

Rectification of errors involves correcting mistakes in financial records. Errors can occur due to omission, incorrect recording, or misclassification of transactions.

Types of Errors:

1. **Errors of Omission:** A transaction is completely omitted from the books.
   - **Example:** Forgetting to record a purchase.
   - **Rectification:** Record the omitted entry in the relevant accounts.
2. **Errors of Commission:** A transaction is recorded but with the wrong amount or in the wrong account.
   - **Example:** Recording ₹500 as ₹50.
   - **Rectification:** Correct the amount or the account in which the entry was made.
3. **Errors of Principle:** A transaction is recorded in violation of accounting principles.
   - **Example:** Treating revenue expenditure as capital expenditure.
   - **Rectification:** Reverse the incorrect entry and record it correctly.
4. **Compensating Errors:** Two or more errors that cancel each other out.
   - **Example:** Understating income by ₹200 and overstating expenses by ₹200.
   - **Rectification:** Identify and correct each error separately.
5. **Errors of Duplication:** Recording the same transaction more than once.
   - **Example:** Entering a purchase invoice twice.
   - **Rectification:** Reverse the duplicated entry.

Methods of Rectification:

1. **Before Preparation of Trial Balance:** Correct the error directly in the ledger accounts.
2. **After Preparation of Trial Balance:** Use a Suspense Account to temporarily hold discrepancies until they are resolved.

Importance of Adjustment Entries

Adjustment entries are crucial for accurate financial reporting and ensuring compliance with accounting principles. Here's why they are important:

1. **Accurate Financial Statements:**

   Adjustment entries ensure that revenues and expenses are recognized in the correct accounting period, providing a true and fair view of the financial position.

2. **Compliance with Accounting Standards:**

   These entries are necessary to adhere to the Matching Principle (matching revenues with related expenses) and Accrual Principle (recording transactions when they occur, not when cash is received or paid).

3. **Reflect True Profit or Loss:**

   Adjustments for accrued expenses, prepaid expenses, depreciation, and provisions help calculate the actual profit or loss for the accounting period.

4. **Preparation for Audit:**

   Adjustment entries help ensure that the books of accounts are accurate, reducing discrepancies during audits.

5. **Improved Decision-Making:**

   Adjusted financial statements provide stakeholders with accurate data for making informed decisions.

6. **Legal and Tax Compliance:**

   Proper adjustments ensure that income and expenses are reported accurately, aiding in compliance with tax laws and regulations.

Importance of Rectification of Errors

Rectification of errors is vital to maintain the integrity and reliability of financial records. Here's its importance:

1. **Correct Representation of Financial Data:**

   Rectifying errors ensures that the financial statements reflect the true financial position of the business.

2. **Maintaining Trustworthiness:**

   Accurate books of accounts enhance the credibility of the business among stakeholders, investors, and regulatory authorities.

3. **Facilitating Audit Process:**

   Errors in financial records can complicate audits. Rectification ensures smooth audits by presenting accurate data.

4. **Compliance with Laws and Standards:**

   Correcting errors helps in adhering to accounting standards and legal requirements, avoiding penalties or legal complications.

5. **Avoidance of Misinterpretation:**

   Financial errors can mislead management and stakeholders, resulting in poor decisions. Rectification prevents such issues.

6. **Reduction of Financial Risks:**

   Errors, if uncorrected, can escalate over time, causing larger discrepancies. Rectification mitigates such risks.

7. **Smooth Preparation of Future Accounts:**

   Correcting errors in the current period ensures that opening balances for the next period are accurate.

8. **Transparency and Accountability:**

   Identifying and rectifying errors fosters transparency and accountability in accounting practices.

Questions:

1. Which of the following is a capital expenditure?

   a) Payment of salaries

   b) Purchase of machinery

   c) Repair of machinery

   d) Rent for the office building

2. Which of the following is considered a revenue receipt?

   a) Loan from a bank

   b) Sale of old furniture

   c) Revenue from sales

   d) Issue of shares

3. Which of the following would be recorded as a capital receipt?

   a) Cash sales

   b) Loan from a bank

   c) Rent received

   d) Interest received on investments

4. Revenue expenditure is typically incurred for which of the following?

   a) Acquiring new machinery

   b) Day-to-day operations

   c) Purchasing land

   d) Constructing a new building

5. Which of the following is NOT a characteristic of capital expenditure?

   a) Long-term benefit

   b) Non-recurring in nature

   c) Expensed in the profit and loss account

   d) Increases the earning capacity of the business

6. Which of the following is an example of an accrued expense?

   a) Prepaid Rent

   b) Unearned Revenue

   c) Salaries Payable

   d) Depreciation Expense

7. If a transaction is completely omitted from the books, it is an error of:

   a) Commission

   b) Principle

   c) Omission

   d) Compensating

8. Which of the following errors will not affect the Trial Balance?

   a) Posting to the wrong account

   b) Omitting an entry in the ledger

   c) Entering a debit as a credit

   d) Adding up the ledger incorrectly

9. The process of distributing the cost of a tangible asset over its useful life is known as:

   a) Amortization

   b) Depreciation

   c) Accrual

   d) Prepayment

10. A customer paid in advance for services, but the services have not yet been provided. This should be recorded as:

    a) Revenue

    b) Expense

    c) Asset

    d) Liability

Answer:

1	2	3	4	5	6	7	8	9	10
b	c	b	b	c	c	c	a	b	d

Topic

Module 1: Basics of Income Tax Act

INTERMEDIATE

Group I - Paper-7A

Direct Taxation (DT)

Agricultural Income

In India, agricultural income is typically exempt from income tax under section 10(1) of the Income Tax Act. The primary reason for this exemption is to support the agricultural sector and the farmers. However, there are specific rules and conditions that determine what qualifies as agricultural income and how it's treated.

Meaning

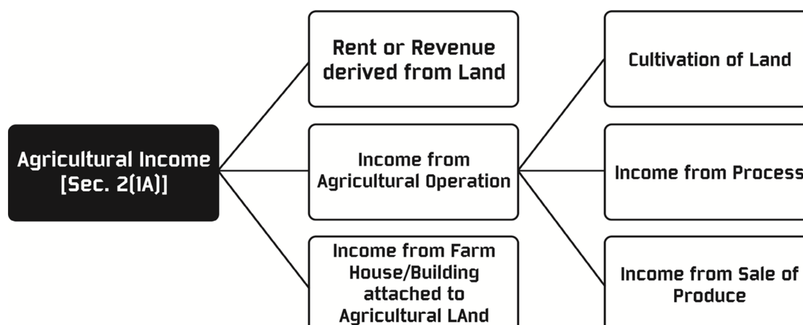
Agricultural income means -

a. Any rent or revenue derived from land, which is *situated in India* & is *used for agricultural purposes*;

b. Any income derived from such land by *agricultural operations*[#];

c. Any income derived from such land by the cultivator by processing the agricultural produce raised or by the receiver of rent in kind by processing the agricultural produce received; so as to render it fit for sale in the market.

d. Any income derived from such land on sale made by the cultivator of the agricultural produce raised; or by the receiver of rent in kind of the agricultural produce received; without carrying on any process, other than the process required to render it fit for the market.



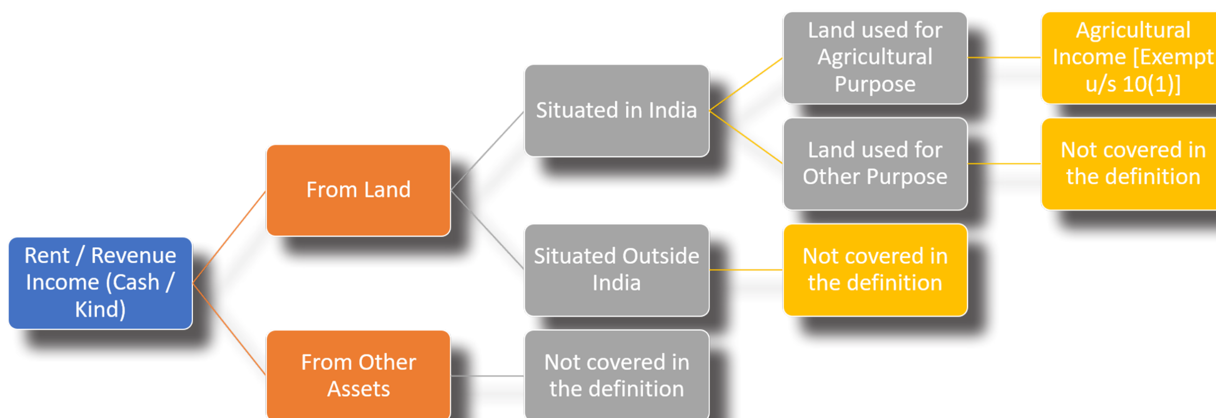
e. Any income derived from a building subject to fulfillment of the following conditions

- The building should be occupied by the cultivator or receiver of rent in kind.
- The building should be on or in the immediate vicinity of the land, being situated in India and used for agricultural purposes.
- The building should be used as dwelling house or store-house or other out building.
- The land is either situated in rural area or assessed to land revenue.

[#]**Agricultural operation** means:

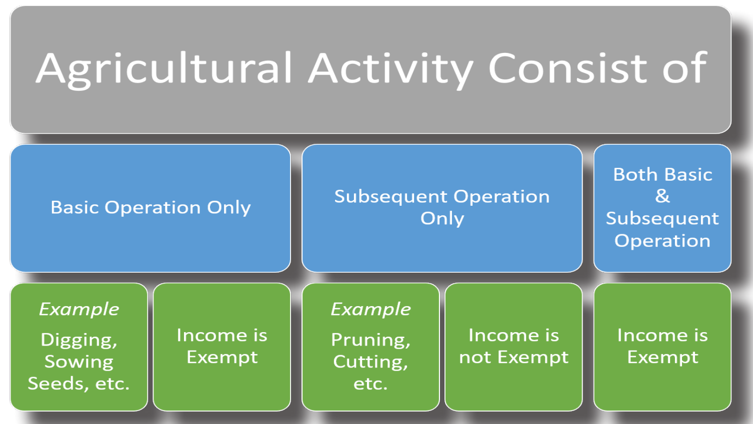
- **Basic Operation:** It means application of human skill & labour upon the land, prior to germination. E.g. Tilling of land, sowing of seeds, planting, irrigation, etc.
- **Subsequent Operation:** It means operations which fosters the growth and preserves the produce; for rendering the produce fit for sale in market; and which are performed after the produce sprouts from the land. E.g. pruning, cutting, harvesting, etc.

Chart for understanding

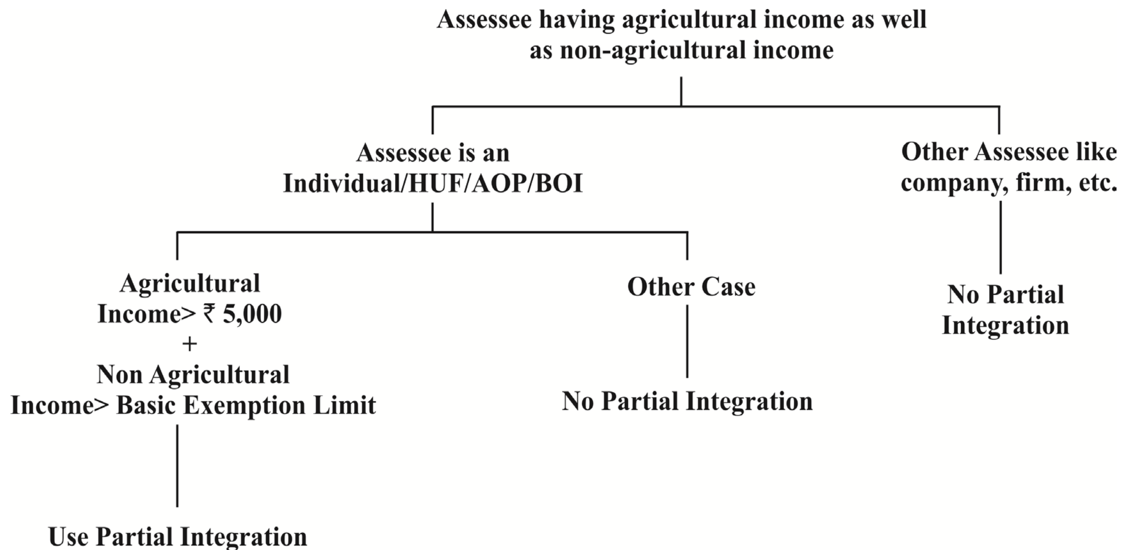


Treatment of Partly Agricultural & Partly Non-Agricultural Income

- Growing & manufacturing tea: 60% is agricultural income and 40% is non-agricultural income.
- Growing & manufacturing rubber: 65% is agricultural income and 35% is non-agricultural income.
- Growing & manufacturing coffee:
  - If coffee grown and cured by the seller: 75% is agricultural income and 25% is non-agricultural income.
  - If coffee grown, cured, roasted and grounded by the seller: 60% is agricultural income and 40% is non-agricultural income.
- **Any Other Case:** In such case, assessee will prepare two statements of income, i.e., one for agro-business and another for non agro-business and for computing agricultural income, the market value of any agricultural produce, which is utilised as raw material in such business, is to be treated as revenue for agro-business and deductible expenditure for non agro-business.



Impact of Agricultural Income on Tax Computation (Partial Integration)



Conditions:

1. The assessee is an individual, HUF, a BOI, an AOP, or an artificial juridical person.
2. The assessee has non-agricultural income exceeding the basic exemption limit.
3. The agricultural income of the assessee exceeds ₹ 5,000.

Treatment

Step 1: Compute income tax on the total income of the assessee including agricultural income.

Step 2: Compute income tax on (Agricultural income + Basic Exemption Limit)

Step 3: Tax liability before cess = (Tax as per step 1) - (Tax as per step 2)

State -vs.- Central Jurisdiction

In this context it is worthwhile to note that the taxation of agricultural income falls under state jurisdiction due to the devolution of powers from the central government to states as per the Constitution. Each state has the authority to levy taxes on agricultural activities within its boundaries, although most states prefer to align with the central exemption to avoid administrative complexities and support the agricultural sector.

Choose the correct option:

1. Which of the following is an agricultural income?
   (a) Dividend paid by a company to its shareholders out of agricultural income
   (b) Share of Profit of a Partner from a firm engaged in an agriculture operation
   (c) Income from supply of water by an assessee from a tank in agriculture land
   (d) Interest received by a money lender in the form of agricultural produce
2. Which of the following incomes received by an assessee are exempt under section 10 of the Income-tax Act, 1961?
   (a) Agricultural Income
   (b) Salary of a partner from a firm
   (c) Salary received by a member of a ship's crew
   (d) Cash gift of ₹ 5,00,000 received from a friend
3. In case of an individual or HUF, agricultural income is –
   (a) Exempted
   (b) Exempted but included in the total income for the rate purpose
   (c) Fully taxable provided it is earned from India
   (d) Taxable at a flat rate of 10%
4. In case of an assessee engaged in the business of manufacturing of tea, his agricultural income is-
   (a) 60% of total receipt of the business
   (b) 60% of income of the business
   (c) Nil
   (d) 40% of income of the business
5. Remuneration to partner of a firm engaged in the business of growing and manufacturing of rubber in India is –
   (a) Partly agricultural income and partly non-agricultural income
   (b) Agricultural income
   (c) Non-Agricultural income
   (d) Exempted income
6. Out of the following, which activity shall be considered as an agricultural activity?
   (a) Subsequent operation on the agricultural land
   (b) Basic operation on the agricultural land
   (c) Marketing operation of the agricultural produce
   (d) None of the above
7. Agricultural income is exempt u/s _______ of the Indian Income-tax Act, 1961.
   (a) 10(1)
   (b) 2(1A)
   (c) 10(2A)
   (d) 10A
8. Income from saplings shall be considered as __________ .
   (a) Agricultural Income
   (b) Business Income
   (c) Partly agricultural income and partly business income
   (d) Income from other sources
9. Which of the following is not an agricultural income?
   (a) Rent received from a land situated in India for agricultural purpose
   (b) Income derived from agriculture produce
   (c) Income derived from land being let out for the marriage of a farmer
   (d) Income from producing of tea leaves
10. Mr. X is engaged in growing and manufacturing tea in India. His income from this activity is ₹ 1,40,000. His agriculture income will be –
   (a) ₹ 70,000
   (b) ₹ 84,000
   (c) ₹ 1,40,000
   (d) ₹ 56,000

Answer:

1	2	3	4	5	6	7	8	9	10
b	a	b	b	a	b	a	a	c	b

Topic

Module 5: Goods and Services Tax (GST) Laws

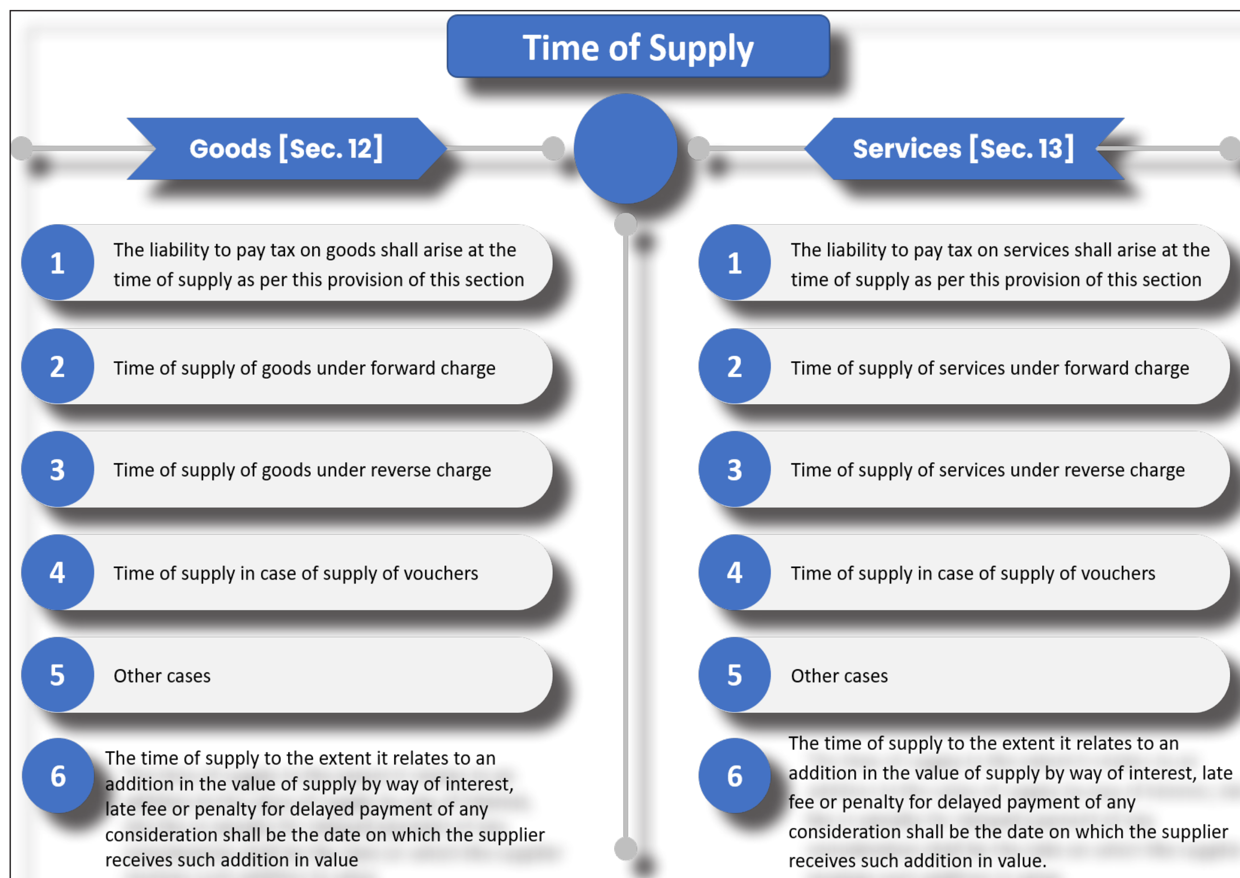
INTERMEDIATE

Group I - Paper-7B

Indirect Taxation (IDT)

Time of Supply

The concept of Time of Supply is fundamental in the Goods and Services Tax (GST) framework as it determines the point at which the supply of goods or services is deemed to have taken place. This is crucial because it helps in determining the due date for the payment of taxes, filing of returns, and availing input tax credits. Under GST, the time of supply is different for goods and services, and separate provisions cater to each scenario. The schema of the provisions is enumerated here in below:



Time of Supply of Goods – Forward Charge [Sec. 12(2)]

The time of supply of goods shall be the **earlier** of the following dates:

a. date of issue of invoice by the supplier; or

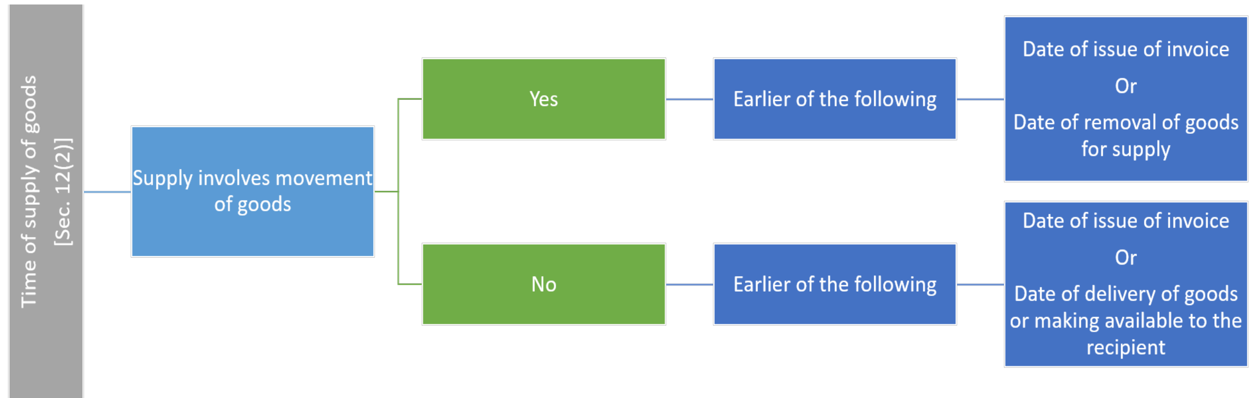
b. the last date on which he is required to issue the invoice with respect to the supply u/s 31; or

Taxpoint

A registered person supplying taxable goods shall issue a tax invoice, **before or at the time of**:

Where the supply involves movement of goods	Removal of goods for supply to the recipient
Where the supply does not involve movement of goods	Delivery of goods or making available thereof to the recipient

In nutshell, in case of supply of goods, time of supply is as under:



Time of Supply of Goods in case of reverse charge [Sec. 12(3)]

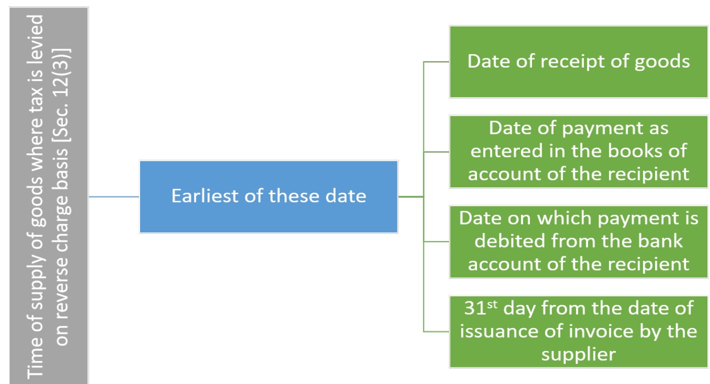
In case of supplies in respect of which tax is paid or liable to be paid on reverse charge basis, the time of supply shall be the earliest of the following dates:

a. the date of the receipt of goods; or

b. the date of payment as entered in the books of account of the recipient; or

c. the date on which the payment is debited in his bank account; or

d. the date immediately following 30 days from the date of issue of invoice or any other document, by whatever name called, in lieu thereof by the supplier.



Taxpoint:

- *Where it is not possible to determine the time of supply as per aforesaid rule, the time of supply shall be the date of entry in the books of account of the recipient of supply.*
- *Please note that in case of reverse charge, to determine time of supply, payment date is relevant*

Time of Supply in case of Voucher [Sec. 12(4)]

In case of supply of vouchers by a supplier, the time of supply shall be:

If the supply is identifiable at the point at which voucher is issued	The date of issue of voucher
In all other cases	The date of redemption of voucher

Taxpoint:

- *As per sec. 2(118), "voucher" means an instrument where there is an obligation to accept it as consideration or part consideration for a supply of goods or services or both and where the goods or services or both to be supplied or the identities of their potential suppliers are either indicated on the instrument itself or in related documentation, including the terms and conditions of use of such instrument.*

Time of Supply of goods in residual cases [Sec. 12(5)]

Where it is not possible to determine the time of supply under any of the aforesaid provisions, the time of supply shall be:

Where a periodical return has to be filed	The date on which such return is to be filed
In any other case	The date on which the tax is paid.

Time of Supply in case of enhancement in value on account of interest, late fee, etc. [Sec. 12(6)]

The time of supply to the extent it relates to an addition in the value of supply by way of interest, late fee or penalty for delayed payment of any consideration shall be the date on which the supplier receives such addition in value.

Time of Supply of Services – Forward Charge [Sec. 13(2)]

The time of supply of services shall be the earliest of the following dates, namely:

Situation	Time of Supply
If the invoice is issued within the period prescribed u/s 31	a. The date of issue of invoice by the supplier; b. The date of receipt of payment - whichever is earlier
If the invoice is not issued within the period prescribed u/s 31	a. The date of provision of service; b. The date of receipt of payment - whichever is earlier
In any other case	The date on which the recipient shows the receipt of services in his books of account

Taxpoint

- "The date of receipt of payment" shall be the date on which the payment is entered in the books of account of the supplier or the date on which the payment is credited to his bank account, whichever is earlier.
- The supply shall be deemed to have been made to the extent it is covered by the invoice or, as the case may be, the payment.
- Where the supplier of taxable service receives an amount up to ₹ 1,000 in excess of the amount indicated in the tax invoice, the time of supply to the extent of such excess amount shall, at the **option** of the said supplier, be the date of issue of invoice relating to such excess amount.
- *Time limit for issuance of invoice u/s 31 r.w. r. 47 is general scenario*: Within 30 days from the date of the supply of service (45 days in case of insurance/banking company or a financial institution, including NBFC)

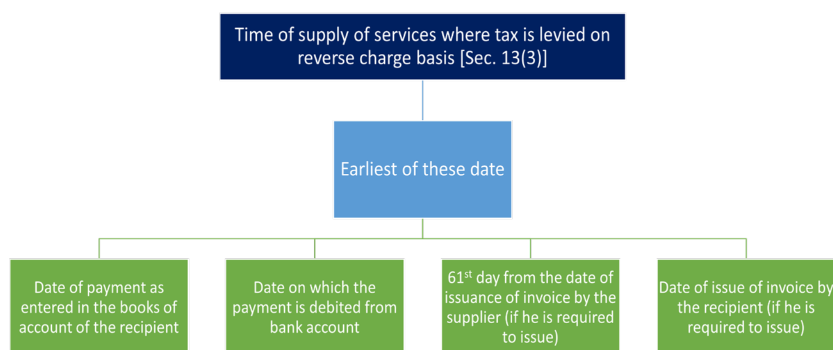
Time of Supply of Services – Reverse Charge [Sec. 13(3)]

In case of supplies in respect of which tax is paid or liable to be paid on reverse charge basis, the time of supply shall be the earlier of the following:

a. the date of payment as entered in the books of account of the recipient; or

b. the date on which the payment is debited in his bank account; or

c. the date immediately following 60 days from the date of issue of invoice or any other document, by whatever name called, in lieu thereof by the supplier, in cases where invoice is required to be issued by the supplier.



d. the date of issue of invoice by the recipient, in cases where invoice is to be issued by the recipient, the date of issue of invoice by the recipient

Taxpoint

- *Where it is not possible to determine the time of supply as per aforesaid rule, the time of supply shall be the date of entry in the books of account of the recipient of supply.*
- *In case of supply by associated enterprises, where the supplier of service is located outside India, the time of supply shall be the date of entry in the books of account of the recipient of supply or the date of payment, whichever is earlier.*

Time of Supply of Services – Voucher [Sec. 13(4)]

In case of supply of vouchers by a supplier, the time of supply shall be:

If the supply is identifiable at the point at which voucher is issued	The date of issue of voucher
In all other cases	The date of redemption of voucher

Time of Supply of Services – Residual Cases [Sec. 13(5)]

Where it is not possible to determine the time of supply of service under any of the aforesaid provisions, the time of supply shall be:

Where a periodical return has to be filed	The date on which such return is to be filed
In any other case	The date on which the tax is paid.

Time of Supply in case of enhancement in value on account of interest, late fee, etc. [Sec. 13(6)]

The time of supply to the extent it relates to an addition in the value of supply by way of interest, late fee or penalty for delayed payment of any consideration shall be the date on which the supplier receives such addition in value.

Change in rate of tax in respect of supply of goods or services [Sec. 14]

The time of supply, where there is a change in the rate of tax in respect of goods or services or both, shall be determined in the following manner

Invoice issued	Payment received	Time of Supply	Applicable Rate
A. *Where the goods or services or both have been supplied before the change in rate of tax*			
After	After	a. Date of receipt of payment; or b. Date of issue of invoice - whichever is earlier	New Rate
Before	After	Date of issue of invoice	Old Rate
After	Before	Date of receipt of payment	Old Rate
B. *Where the goods or services or both have been supplied after the change in rate of tax*			
Before	After	Date of receipt of payment	New Rate
Before	Before	a. Date of receipt of payment; or b. Date of issue of invoice - whichever is earlier	Old Rate
After	Before	Date of issue of invoice	New Rate

Taxpoint:

Rate applicability rule: There are three events viz. (a) supply; (b) issuance of invoice; (c) receipt of payment. Out of these 3 events, atleast two events are occurred after change of rate of tax, new rate is applicable. On the other hand, any of the 2 events are occurred before change of rate of tax, old rate is applicable.

Conclusion

Under Goods and Services Tax (GST) regime, the "time of supply" is crucial for determining when the supply of goods and services is to be taxed. The time of supply can differ for goods and services and is influenced by the type of the transaction (normal supply, reverse charge, etc.)

Topic

Module 4:
Cost Book Keeping

INTERMEDIATE

Group I - Paper-8

Cost Accounting (CA)

COST ACCOUNTING

Integrated Accounting

The main purpose of financial accounting is to ascertain financial position of any business at the end of any accounting period, whereas the purpose of cost accounting is to ascertain the cost of a product and record the transections related to costs only. Integrated Accounting is a single set of accounts system, which provides both financial and cost accounting information required for management information system. Maintenance of two separate sets of books cause duplication of records of certain items, once in financial books and again in cost books. Maintenance of two sets of books enhances cost. Again when transactions are not large, maintenance of two sets of accounts separately is an unnecessary voluminous task.

As for example :--

For credit sales :

In Financial Accounts –

Debters A/c. Dr.

To Sales

In Cost Accounts :--

Cost Ledger Control A/c. Dr.

To Sales

In Integral Accounts

Debtors A/c. Dr.

To Sales

Reconciliation of Cost Accounts with Financial Accounts

This chapter is important for every students related to this subject. Transactions exclusively relevant to Cost Accounts and Financial Accounts are to be identified and to be considered in the reconciliation statement. The amount of difference in items of costs or incomes appearing in both sets are to be identified and to be considered while preparing reconciliation statement. For instance , if profit shown in the cost edger is taken first and the amount that gives rise to differences are added or deducted from it , the resultant figure should agree with the profit shown in financial ledger.

Reasons for variation in Profit

A. Under or over absorption of overhead.

B. Adoption of different methods of valuation of stock.

C. Items purely of financial accounts.

D. Items purely of cost accounts.

E. Appropriation of profit not dealt with in the cost Accounts.

F. Others.

Now we can go through a detailed study of the above reasons for variation of profits :

(a) Under or over absorption :

In cost accounts in order to ascertain unit cost of a product predetermined rates are charged in respects of overhead. The basis normally used are percentage on prime cost, rate per unit, percentage of direct wages, rate per labour of machine hour. When overhead is recovered on predetermined rates it may not exactly agree with overheads actually incurred during a period. The difference between overhead 'incurred' and the overhead 'recovered' is known as over/under absorption of overhead. In case of under absorption the costing profit will be higher than financial profit and in case of over absorption costing profit will be lower than the financial profit. Now in order to reconcile costing profit with financial profit two adjustments are necessary with financial profit :

(1) In case of under absorption of overhead, the amount of under absorption overhead will have to be added back to financial profit and

(2) In case over absorption of overhead, the amount of over absorption overhead will have to be deducted from financial profit.

(b) Adoption of different methods of valuation of Stock :

In financial accounts the stock is valued based on the principal of "Cast or Market Value, whichever is lower". But in cost accounts the stock of raw materials are valued on the basis of FIFO, LIFO or other methods of pricing issues, WIP may be valued at prime cost or prime cost plus variable cost or prime cost plus variable

and fixed overhead. Thus the stock valuation under two sets of accounts will be different and, as such, reconciliation is necessary. This reconciliation will be easier if the following principles are followed :

(1) The lower the opening stock the higher will be the profit, and

(2) The higher the closing stock the higher is the profit, and vise versa.

For instance if the opening stock figures are more in financial accounts, profit as per financial accounts are to be increased to arrive at the profit as per cost accounts, and vise versa.

(c) Items purely of financial nature :

There are some items which are of purely financial nature having no counterpart accounting. This will lead to difference in profit. The common financial expenses are :

(1) Lapses on sale of fixed assets.

(2) Interest on bank loan, debentures, mortgage etc.

(3) Remuneration paid to proprietor in excess at fair reward for services rendered.

(4) Damages payable at Law.

(5) Penalties payable.

(6) Preliminary expenses or goodwill written-off.

(7) Cost for issue of shares, debentures and bonds.

(8) Discount on issue of bonds, debentures etc.

On the other hand, the common financial incomes are :

(1) Profit on sale of Fixed assets.

(2) Interest received on bank deposits.

(3) Interest, dividends etc. received on investments.

(4) Rent received

(5) Fees or commission received on issue of shares, debentures etc.

(6) Transfer fees received.

(d) Items purely of cost accounts :

The items which appear only in cost accounts generally are :

(1) Interest on capital supplied by the proprietor.

(2) Rent on own premises.

(3) Depreciation on fully depreciated assets.

(e) Appropriations of profit not dealt with in the cost accounts :

(1) Transfer to Reserve or other funds.

(2) Corporate tax.

(3) Dividend paid.

(4) Additional provisions for depreciation, bad debts etc.

(5) Appropriation to sinking funds for the purpose of providing for repayment of loans or debentures.

(f) Others :

There are some other items which may lead to difference in profits in two sets of accounts .For example, the rates and methods of charging depreciation may vary in two sets of accounts. Someone may adopt the method of charging direct wages to cost of products at predetermined rates. This will result in a difference between the predetermined amount charged to cost accounts and the actual wages booked in the financial accounts.

Steps for Reconciliation

Step 1

Start with a profit as base as per any set of books (either cost or financial).

Step2

Items of expenditures already deducted to calculate the above base profit, but not considered for profit shown by other set should be added back.

Step 3

Items of income already bedded to calculate the above base profit but not considered for profit town by other set should be deducted.

Step 4

Similarly, the expenditures not taken into account in calculating the base profit should be deducted.

Step 5

The incomes not taken into accounts in calculating the base profit should be added back.

Step 6

The expenditures under-charged for calculating base profit should be deducted.

Step 7

The amount of income under-stated in calculating base profit should be added.

Step 8

The expenditures over-stated in calculating base profit should be added.

Step 9

The income over-stated in calculating base profit should be deducted.

Step 10

The resultant figures will be the profit as per the other set of books.

Advantages of Reconciliation

Although in an interlocking system both cost and financial accounts are to be maintained separately, it is preferred to integrated system, because of the following advantages :

(1) As the two profits are ascertained independently, arithmetical inaccuracies, if any, are detected quickly.

(2) From the magnitude of variations validity of cost account can be judged. As for example ,a high under-absorption of overhead indicates that products are under cost.

(3) Further variation may also indicate inefficiency which required controlling measures.

(4) Frauds may also be detected if there is any wide difference in value of physical stock and the stock as per books of accounts.

(5) Independency of cost book is preferred as these are not relevant to preparing profit and loss account and so not subject to statutory audit**.**

From the following Problem and it's solution, we can easily understand the context of reconciliation of two Accounts:

Problem:

Given below is the Trading and Profit and Loss Account of a Company for the year ended 31st December 2024.

Particulars	₹	Particulars	₹
To Materials	27,40,000	By Sales (60000 units)	60,00,000
To Wages	15,10,000	By Stock (2000 units)	1,60,000
To Factory Expenses	8,30,000	By WIP:	
To Administration Exp.	3,82,400	Materials 64,000	
To Selling Exp.	4,50,000	Wages 36,000	
To Preliminary expenses	60,000	Fty. Exp. 20,000	1,20,000
To Net Profit	3,25,000	By Dividend received	18,000
	62,98,000		62,98,000

The company manufactures standard units . In the Cost Accounts :

a) Factory expenses have been allocated to production at 20% of Prime Cost.

b) Adm. Expenses at at ₹ 6 per unit produced, and

c) Selling expenses at ₹ 8 per unit sold .

Prepare the Costing Profit and Loss Account of the Co. and reconcile the same with the profit disclosed by the Financial Accounts.

Solution:

Profit as per Cost Accounts

Particulars	₹	Particulars	₹
To Materials (Note a)	26,76,000	By Sales	60,00,000
To Wages (Note b)	14,74,000	By Closing Stock (Note f)	1,72,646
To Factory expenses (Note c)	8,30,000		
To Adm. Expenses (Note d)	3,72,000		
To Selling Expenses (Note e)	4,80,000		
To Net Profit	3,40,646		
	61,72,646		61,72,646

Reconciliation Statement for the year ended 31st December 2024.

Profit as per Cost Accounts		3,40,646
Add:		
1) Dividend not included in Cost Accounts	18,000	
2) Factory Expenses over-absorbed in Cost Accounts (8,30,000- 8,10,000)	20,000	
3) Selling Overhead over-absorbed in Cost Accounts ((4,80,000- 4,50,000)	30,000	68,000
		4,08,646
Less:		
1) Preliminary expenses not included in Cost Accounts.	60,000	
2) Administration Overhead under-absorbed (3,82,400 - 3,72,000)	10,400	
3) Closing Stock Under-valued in Cost Accounts (1,72,646 - 1,60,000)	12,646	83,046
Profit as per Financial Account		3,25,600

Working Notes:

a) Material = 27,40,000 – 64,000 = ₹ 26,76,000

b) Wages = 15,10,000 – 36,000 = ₹ 14,74,000

c) Factory Exp. = 20% of Prime Cost = (26,76,000 + 14,74,000) × 20% = ₹ 8,30,000

d) Adm. Exp. = 62000 units 6 = ₹ 3,72,000

e) Selling exp. = 60000 units x 8 = ₹ 4,80,000.

f) Closing Stock = [(26,76,000+ 14,74,000+ 8,30,000+ 3,72,000) / 62,000] × 2000 = ₹ 1,72,646

Topic

Module 4 : Application of Operation Research - Production Planning and Control

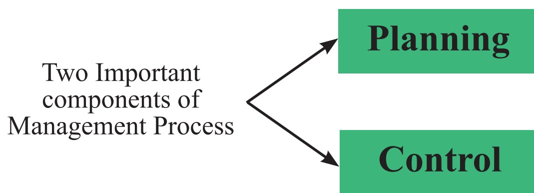
INTERMEDIATE

Group II - Paper-9

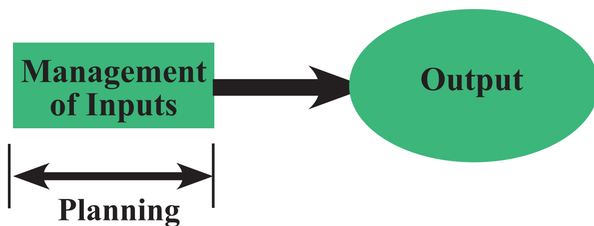
Operations Management and Strategic Management (OMSM)

Operations Management

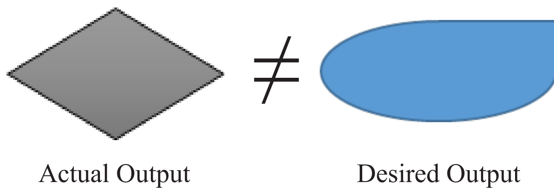
In this issue we will discuss on Productions planning and Control with some numerical illustrations. Refer module 4 of guide book



Planning is management of all Input variables to achieve a defined Output Goal.

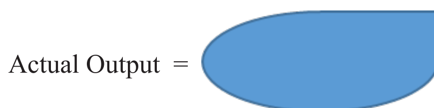


When actual Output varies from the desired output:



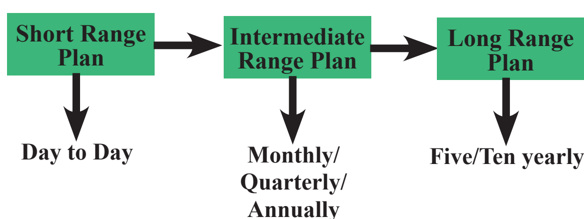
Actual Output Desired Output

We need Production Control which involves corrective actions to make



Production planning would therefore consists mainly of the evaluation and determination of production inputs such as Labour (Manpower), Machinery & Equipment, Materials and Utilities to achieve the desired goals.

Like all plans Production plans also have a time dimension.

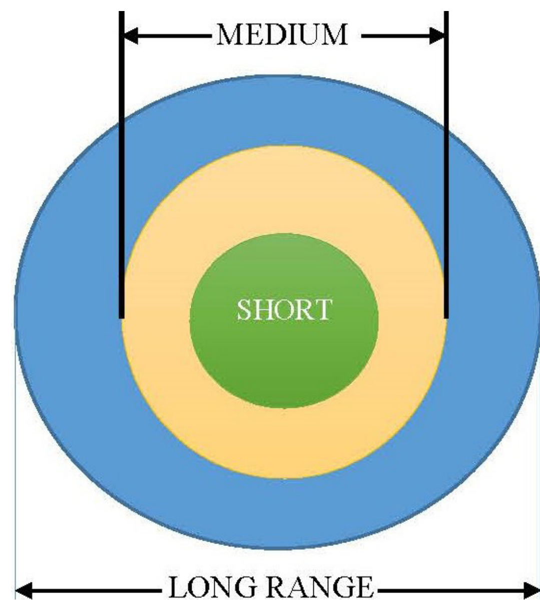


Time dimensions increases ⟶ production planners get more flexibility to change the input variables and get more time to carry out desired modifications in the production process to achieve the desired goal.

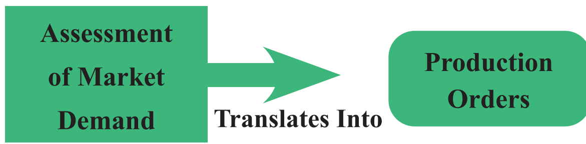
The five year range plan allows a company the flexibility of increasing the production capacity by purchasing new equipment, locating new plants, acquiring new technology or recruiting adequate technical manpower. These are not possible in day to day plan even if these are demands of the situation.

Under weekly or daily short range plans hardly any flexibility is left except to assign different jobs to the available machines and manpower.

The planning problems for different time horizons are therefore different and the solutions are also different.



The above figure indicates Short, Medium and Long range plans have to dovetail into one another. The long range production planning are more integrative & organization wide. So Long range production planning is nothing but lost its own identity to overall corporate plan. Therefore production planning as it is usually meant, is really the intermediate range and short range plan. That's the reason behind commencement of production planning follows from the marketing plan. In other wards we can depict:



Production planning is such that Market Demand = Production order

At the beginning of production planning Market demand are either known or are forecasted. Similarly Production Capacities are also known. Production capacities cannot be changed in the short or medium range time horizon. Under this constraint production are to be made to meet the market demand. Different alternatives are possible to make this match (market demand = production order) but all at different cost and utility structure (100 units can be produced in 1 labour hour @ ₹100 or alternatively can be produced in ½ hour @ ₹200). Out of these alternatives Production planning guides us selection of the best alternative with optimization of the cost or other utilities.

Under Production Planning first planning is made for Gross level then it is detailed for individual products.

Let us take some illustrations.

Illustration 1:

Nio Amore makes a variety of cakes in their factories located throughout India. This business exhibits a highly seasonal demand pattern as shown in the quarterly forecasts in table-I below. With the given cost details determine whether a level production or chase demand production strategy would more economically meet the demand for cakes.

Quarter	Sales Forecast (pounds)
1st	90000
2nd	40000
3rd	100000
4th	170000

Hiring cost = ₹100 per worker; Firing cost = ₹500 per worker; Inventory carrying cost = ₹0.50 per pound per quarter; Production per employee = 1000 pounds per quarter; Beginning workforce = 100 workers;

Answer:

For the level production we first need to calculate average quarterly demand:

(90000+40000+100000+170000)/4 = 100000 pounds

We know that Production per employee = 1000 pounds per quarter

So, 100000/1000 = 100 workers are needded in each quarter to meet the average production

Production in excess of demand is stored in inventory where it remains until it is used to meet demand in a later period. Demand in excess of production is met by using inventory from the previous quarter.

The production plan and resulting inventory costs are given in the following table. Inventory is shown at cumulative figures. In the 1st quarter Production > Demand by 10000 pounds which goes to inventory. In 2nd quarter again Production > Demand by 60000 pounds and thereby a cumulative inventory of 70000 pounds.

In 4th quarter excess demand of 70000 pounds could be met from inventory.

(Cakes are sold on FIFO basis, so no question of selling old perished cakes)

Quarter	Demand	Production	Inventory	Inventory Carrying Cost(Rs) (Inventory *0.5)
1	90000	100000	10000	5000
2	40000	100000	70000	35000
3	100000	100000	70000	35000
4	170000	100000	0	0
Total	400000	400000	150000	75000

Now if the company follows chase demand strategy and meets the demand not through generation of inventories but by hiring and firing workers then the production plan and resulting costs are given in the following table:

Quarter	Demand	Production	Workers Needed	Workers Hired	Workers Fired
1	90000	90000	90	0	10
2	40000	40000	40	0	60
3	100000	100000	100	0	0
4	170000	170000	170	70	0
Workers Hireing Cost: (70*100) =7000					
Workers Fireing Cost: (10*500+60*500) =35000					
Total Cost of chase demand strategy (7000+35000) =42000					

Although chase demand is better option for the company from an economic point of view but it penalizes the workforce in a harsh way. Moreover availability of idle skilled worker just in time is also a factor to implement the strategy effectively.

Probably the most common approach to production planning is trial and error using mixed strategies.

Under mixed strategy management can mix up different strategies putting some cap like:

"No more than x percent of the workforce can be laid off in one period of concern"

"Inventory levels cannot exceed x rupees"

Many industries that experience a slowdown/less demand during part of the year may simply shut down production during the low demand season and schedule everyone's vacation during that time/overhaul maintenance during that time.

During rainy season when system demand in power grid becomes low, NTPC plans overhauling/maintenance of their generating units so that all these units could operate in high demand festive period.

For some industries the production planning task revolves around the supply of raw material not on demand patterns. Rice oil meals generally plan more production schedule during crop growing season in a year although demand for rice oil is highest in other time of a year.

Illustration 2:

Demand for a company's product follows a seasonal pattern as shown in the following table:

Month	Demand (Cases)	Month	Demand (Cases)
January	1000	July	500
February	400	August	500
March	400	September	1000
April	400	October	1500
May	400	November	2500
June	400	December	3000

Each worker can produce on average 100 cases each month. Overtime is limited to 500 cases and subcontracting is unlimited. No products are in inventory now. The wage rate is ₹10 per case for regular production, ₹15 for overtime production and ₹25 for subcontracting. No stock outs are allowed. Holding cost is ₹1 per case per month. Increasing the workforce costs approximately ₹1000 per worker. Decreasing the workforce costs ₹500 per worker.

Management wishes to test the following scenarios for planning production:

a. Level production over the 12 months;

b. Production to meet demand each month;

c. Increase or decrease the workforce in five-worker increments.

Ans:

The detail computation under level production is shown in the following table.

The average production is—

(1000 + 5*400 + 2*500 + 1000 + 1500 + 2500 + 3000)/ 12 = 1000

Since production rate/worker = 100

So no of workers = 1000/100 =10.

Under level production neither additional workers are hired nor surplus workers fired. Demand is met either from production or from production plus inventory.

Month	Demand	Avg Production	OT	Subcontract	Inventory	No of Workers	Workers Hired	Workers Fired
Jan	1000	1000	0	0	0	10	0	0
Feb	400	1000	0	0	600	10	0	0
March	400	1000	0	0	1200	10	0	0
April	400	1000	0	0	1800	10	0	0
May	400	1000	0	0	2400	10	0	0
June	400	1000	0	0	3000	10	0	0
July	500	1000	0	0	3500	10	0	0
August	500	1000	0	0	4000	10	0	0
Sept	1000	1000	0	0	4000	10	0	0
Oct	1500	1000	0	0	3500	10	0	0
Nov	2500	1000	0	0	2000	10	0	0
Dec	3000	1000	0	0	0	10	0	0
Total	12000				26000		0	0

Total cost of this level production strategy is

Wage:	12000*10=	120000
Holding Cost:	26000*1 =	26000
Total Cost		146000

Details for Chase demand strategy with hiring and firing of workers with 10 no of workers present initially (as level production requires 10 workers, so we assume that) is given below:

Month	Demand	Production	OT	Subcontract	Inventory	No of Workers	Workers Hired	Workers Fired
Jan	1000	1000	0	0	0	10	0	0
Feb	400	400	0	0	0	4	0	6
March	400	400	0	0	0	4	0	0
April	400	400	0	0	0	4	0	0
May	400	400	0	0	0	4	0	0
June	400	400	0	0	0	4	0	0
July	500	500	0	0	0	5	1	0
August	500	500	0	0	0	5	0	0
Sept	1000	1000	0	0	0	10	5	0
Oct	1500	1500	0	0	0	15	5	0
Nov	2500	2500	0	0	0	25	10	0
Dec	3000	3000	0	0	0	30	5	0

Workers hired = No of workers required in the month - Opening no of workers at the beginning of month, when No of workers required in the month > Opening no of workers at the beginning of month.

Workers fired = Opening no of workers at the beginning of month - No of workers required in the month, when No of workers required in the month < Opening no of workers at the beginning of month.

Total cost of this chase demand strategy is

Cost of Hiring:	1000*(1+5+5+10+5)=		26000
Cost of Firing	500*(6)=		3000
Wage	12000*10=		120000
			149000

On the third strategy a probable solution is given below. Within the limits many other planning schedule could be explored.

Month	Demand	Production	OT	Subcontract	Inventory	No of Workers	Workers Hired	Workers Fired
Jan	1000	1000	0	0	0	10	0	0
Feb	400	500	0	0	100	5	0	5
March	400	500	0	0	200	5	0	0
April	400	500	0	0	300	5	0	0
May	400	500	0	0	400	5	0	0
June	400	500	0	0	500	5	0	0
July	500	500	0	0	500	5	0	0
August	500	1000	0	0	1000	10	5	0
Sept	1000	1000	0	0	1000	10	0	0
Oct	1500	1500	0	0	1000	15	5	0
Nov	2500	2000	0	0	500	20	5	0
Dec	3000	2000	500	0	0	20	0	0
Total		11500	500		5500		15	5

Regular wage	11500*10=	115000
OT	500*15 =	7500
Inventory	5500*1 =	5500
Hiring Cost	15*1000 =	15000
Firing Cost	5*500 =	2500
Total Cost		145500

Increase in regular production could be made from September instead of August and then planning would be different as shown below.

In all the computation since OT cost < Subcontracting cost, we prefer OT production within maximum limit of 500 cases than subcontracting.

Month	Demand	Production	OT	Subcontract	Inventory	No of Workers	Workers Hired	Workers Fired
Jan	1000	1000	0	0	0	10	0	0
Feb	400	500	0	0	100	5	0	5
March	400	500	0	0	200	5	0	0
April	400	500	0	0	300	5	0	0
May	400	500	0	0	400	5	0	0
June	400	500	0	0	500	5	0	0
July	500	500	0	0	500	5	0	0
August	500	500	0	0	500	5	0	0
Sept	1000	1000	0	0	500	10	5	0
Oct	1500	1500	0	0	500	15	5	0
Nov	2500	2000	500	0	500	20	5	0
Dec	3000	2000	500	0	0	20	0	0
Total		11000	1000		4000		15	5

Regular wage	11000*10=	110000
OT	1000*15 =	15000
Inventory	4000*1 =	4000
Hiring Cost	15*1000 =	15000
Firing Cost	5*500 =	2500
Total Cost		146500

Illustration 3:

Quarterly demand for a company's product are shown in the following table:

Quarter	Demand (Units)
1	50000
2	150000
3	200000
4	52000

The company could meet the demand by taking either a) by maintaining average production level supported by inventory or ii) by maintaining a normal production level of 50000 units supported by overtime production and subcontracting. The cost and other details of the company are

Inventory carrying cost: ₹3.00 per unit;

Overtime capacity: 80000 units in a quarter;

Subcontracting capacity: 70000 units in a quarter;

Cost of regular production: ₹50 per unit;

Cost of overtime production: ₹75 per unit;

Cost of subcontracting: ₹85 per unit;

Assume company always adjusts inventory from beginning of first quarter to avoid maximum shortage during the period of operation, select the cheapest plant.

Answer:

The computation for plan (a) and its cost of implementation is shown below

Quarter	Demand	Average production	Inventory	Adjusted Inventory with 61000 at beginning of Q1	Cost of Holding Inventory
1	50000	113000	63000	124000	372000
2	150000	113000	26000	87000	261000
3	200000	113000	-61000	0	0
4	52000	113000	0	61000	183000
Total	452000				816000

Cost of Regular production	
(452000 * 50)	22600000
Carrying Cost	
(272000 *3)	816000
Total Cost	23416000

The computation for plan (b) and its cost of implementation is shown below

Quarter	Demand	Regular	Balance	Overtime	Subcontact
1	50000	50000	0		
2	150000	50000	100000	80000	20000
3	200000	50000	150000	80000	70000
4	52000	50000	2000	2000	0
Total		200000		162000	90000

Cost of Regular production	
(200000*50)	10000000
Overtime cost	
(162000*75)	12150000
Subcontract cost	
(90000*85)	7650000
Total Cost	29800000

So plan (a) is accepted.

In plan (a), maximum shortages in inventory occur in quarter (3). If the production manager start the period of operation with 61000 at the beginning of first quarter then this shortages could be avoided.

In plant (b) demand is met through normal production followed by OT production and then by subcontracting as cost of OT < cost under subcontracting.

Suggestions:

This lesson could be used as an aid to teaching on production Planning & Control in study guide. Concept of PPC is vital in studying Operations Management. For Proper understanding read supplementary readings by referring resources mentioned in study guide published by the institute.

Best Wishes.

Topic

Module 2: Preparation of the Statement of Profit and Loss and Balance Sheet (As Per Schedule III of Companies Act, 2013)

Module 7: Provisions Relating to Audit under Companies Act, 2013

INTERMEDIATE

Group II - Paper-10

Corporate Accounting and Auditing (CAA)

Section A: Corporate Accounting

Topic: Preparation of the Statement of Profit and Loss and Balance Sheet (As per Schedule III of Companies Act, 2013)

- **Comprehensive Problem**

From the following Trial Balance and other particulars of MM Ltd., prepare Statement of Profit and Loss for the year ended 31.03.2023 and a Balance Sheet as on that date:

Particulars	Dr. (₹)	Cr. (₹)	Particulars	Dr. (₹)	Cr. (₹)
Equity share capital (of ₹10 each)		8,00,000	Accumulated Depreciation:		
9% Debentures		2,00,000	Building		52,000
Reserves		2,52,000	Machinery		3,86,000
Surplus (Balance on 01.04.2022)		31,500	Vehicles		86,000
Stock on 01.04.2022	1,63,000		Sale of goods		9,26,200
Purchases (Adjusted)	4,47,000		Revenue from services		3,78,000
Advance tax for financial year 2021-22	72,600		Sales returns	37,700	
Advanced tax for financial year 2022-23	65,000		Debenture interest paid	18,000	
Provision for tax for financial year 2021-22		70,000	Interim dividend paid	46,000	
			Wages	93,300	
Remuneration paid to Managing Director	52,000		Commission paid	8,800	
Fixed assets (at cost):			Bank	18,000	
Land	2,71,000		Stock on 31.03.2023	1,22,000	
Building	6,12,000		Salaries	64,200	
Machinery	6,26,000		Establishment expenses	30,200	
Vehicles	1,67,700		Debtors/Creditors	4,35,000	1,68,000
				33,49,700	33,49,700

Additional information:

(a) Provide ₹13,000 for auditor's fees.

(b) Tax for the financial year 2021-22 has been assessed at ₹75,000.

(c) Provision for income tax to be made @ 35% for the financial year 2022-23.

(d) Depreciation to be charged on WDV basis @ 5% on Building, 15% on Machinery and 10% on Vehicles.

(e) Maximum remuneration payable to the Managing Director is ₹48,000.

(f) Further dividend @ 12% is proposed for the year 2022-23 (in addition to interim dividend paid).

Solution:

MM Ltd.

Statement of Profit and Loss for the year ended 31.3.2023

	Particulars	Note No.	Year ended 31.3.23 (₹)	Year ended 31.3.22 (₹)
I.	Revenue from Operations	1	12,66,500	---
II.	Other income: Miscellaneous income		Nil	---
III.	Total revenue [I+II]		12,66,500	---

IV.	Expenses:			
	Purchases of Stock-in-Trade [WN:1]		5,69,000	---
	Changes in inventories of Stock-in-Trade	2	41,000	---
	Employee benefit expenses	3	2,05,500	---
	Finance costs: Debenture interest		18,000	---
	Depreciations and Amortization expenses	4	72,200	---
	Other expenses	5	52,000	---
	Total expenses		9,57,700	---
V.	Profit before tax [III-IV]		3,08,800	---
VI.	Tax expense: Current tax		1,13,080	---
VII.	Profit from continuing operation [V-VI]	6	1,95,720	---
VIII.	Profit from discontinuing operations		Nil	---
IX.	Profit for the period [VII+VIII]		1,95,720	---
X.	Earnings per share: Basic (1,95,720 /80,000 shares)		2.4465	---

Notes to Statement of Profit and Loss [Figures in ₹]

1. Revenue from Operation		
Revenue from sale of goods	9,26,200	
Less: Sales returns	37,700	8,88,500
Revenue from services		3,78,000
		12,66,500

2. Changes in inventories of Stock-in-Trade	
Opening balance (Stock on 1.4.2022)	1,63,000
Closing balance (Stock on 31.3.2023)	1,22,000
	41,000

3. Employee benefit expenses		
Wages		93,300
Salaries		64,200
MD’s remuneration paid	52,000	
Add: Prepaid [52,000 – 48,000]	4,000	48,000
		2,05,500

4. Depreciation and Amortization expenses	
Depreciation on Buildings [(6,12,000-52,000) × 5%]	28,000
Depreciation on Machinery [(6,26,200 – 3,86,000) × 15%]	36,030
Depreciation on Vehicles [(1,67,700 – 86,000) × 10%]	8,170
	72,200

5. Other expenses	
Commission paid	8,800
Establishment expenses	30,200
Audit fees	13,000
	52,000

6. Current tax	
Prov. For tax 2022-23 [3,08,800 × 35%]	1,08,080
Further provision for 2021-22 [WN 2]	5,000
	1,13,080

MM Ltd.

Balance Sheet as on 31.3.2023

Particulars	Note No.	As at 31.3.23 (₹)	As at 31.3.22 (₹)
I. EQUALITY AND LIABILITIES			
1. Shareholders' funds			
(a) Share capital	1	8,00,000	---
(b) Reserves and surplus	2	4,33,220	---
2. Non-current liabilities			
(a) Long-term borrowings: 9% Debentures		2,00,000	---
3. Current liabilities:			
(a) Trade payables: Creditors	3	1,68,000	---
(b) Other current liabilities		15,400	---
(c) Short-term provisions: Provision for tax		1,08,080	---
Total		17,24,700	---
II. ASSETS			
1. Non-current assets			
(a) Property, Plant and Equipment			
(i) Tangible assets	4	10,80,700	---
2. Current assets			
(a) Inventories: Stock-in-Trade		1,22,000	---
(b) Trade receivables: Debtors		4,35,000	---
(c) Cash and cash equivalents: Bank		18,000	---
(d) Short-term loans and advances: Advance tax of 2022-23		65,000	---
(e) Other current assets: Prepaid MD's remuneration		4,000	---
Total		17,24,700	---

Notes to Balance Sheet [Figures in ₹]

1. Share Capital	
Issued, Subscribed and Fully Paid:	
80,000 Equity shares of ₹10 each	8,00,000

2. Reserved and Surplus		
General Reserve		2,52,000
Surplus: Balance on 1.4.2022	31,500	
(+) Profit of 2022-23	1,95,720	
	2,27,220	
(-) Interim dividend paid	46,000	
		1,81,220
		4,33,220

3. Other current liabilities	
Outstanding Audit fees	13,000
Income tax payable (2021-22) [WN: 2]	2,400
	15,400

4. Tangible assets		
Land (at cost)		2,71,000
Building (at cost)	6,12,000	
(-) Accumulated Depre. (52,000+28,000)	80,000	5,32,000
Machinery (at cost)	6,26,200	
(-) Accumulated Depre. (3,86,000+36,030)	4,22,030	2,04,170
Vehicles (at cost)	1,67,700	
(-) Accumulated Depre. (86,000+8,170)	94,170	73,530
		10,80,700

5. Proposed final dividend & CDT thereon
Proposed Final Dividend = ₹ 8,00,000 × 12% = ₹ 96,000

WORKING NOTES:

1. **Purchases of Stock-in-trade**

   We know, Purchases (adjusted) = Purchases Less Closing Stock-in-trade

   Or 4,47,000 = Purchases Less 1,22,00

   Or Purchases = 5,69,000

2. **Tax assessment of 2021-22**

   Provision for tax of 2021-22 = ₹70,000; Assessed tax of 2021-22 = ₹75,000

   There is deficit in Provision for tax and so, further Provision for tax to be created

   = (₹75,000 – ₹70,000)

   = ₹5,000

   Advance tax paid of 2021-22 = ₹72,600.

   Income Tax payable = Assessed tax – Advance tax paid

   = ₹(75,000 - 72,600)

   = Rs. 2,400

Section : B

Topic - Auditing

Q. Who would fix remuneration of a statutory auditor? Discuss the provisions of Section 142 of Companies Act, 2013 in this context.

Answer:

In case of first auditor appointed by the board of directors – Board of Directors.

In case of auditors appointed by the shareholders in general meeting – Shareholders in the general meeting.

In case of auditors appointed by the CAG for Government company – Shareholders in the general meeting.

The general meeting may even delegate powers to fix the remuneration to the board of directors.

Q. What are the components of remuneration of a statutory auditor?

Answer:

The remuneration payable to a company auditor includes the following:

a) Fees to auditor.

b) Expenses, if any, incurred by the auditor in connection with the audit of the company.

c) Cost of any facility provided to the auditor.

d) Disclosure of the amount paid to the auditor should be as per requirement of Schedule III to the Companies Act, 2013.

Q. Discuss the provisions relating to removal of an auditor from his office before the expiry of his term as per the Companies Act, 2013.

Answer:

Section 140(1) of the Companies Act, 2013 discusses the provisions relating to removal of an auditor from his office before the expiry of his term. The objective of this section is to make the removal of an independent and conscientious auditor difficult.

As per Section 140(1), removal of auditors before expiry of his term shall require special resolution and previous approval of the Central Government for the removal of auditor before the expiry of the term. Moreover, the auditor shall be given a reasonable opportunity of being heard before being removed.

In addition to the above, the Companies (Audit and Auditors) Rules, 2014 states that:

a) The application to Central Government has to be made within 30 days of passing the board resolution.

b) The company shall pass a special resolution in a general meeting within 60 days of receipt of approval of the Central Government.

Topic

Module 3:
Tools for Financial Analyses

Module 9:
Data Processing, Organisation, Cleaning and Validation

INTERMEDIATE

Group II - Paper-11

Financial Management and Business Data Analytics (FMDA)

Subject: Financial Management and Business Data Analytics

Financial Management

Fund Flow Statement

It is a statement that shows the inflows and outflows of funds during a period. The inflows indicate from which source how much fund has come into the business. The outflows show for what purpose how much fund has been expended or applied. The period normally indicates the span of time between two consecutive Balance Sheet dates. Fund normally means working capital. So, Fund Flow Statement is a presentation that explains the change of working capital position during a period.

Sources of working capital

1. **Funds from Business Operations**: If the inflow of funds from sale exceeds the outflow of funds to cover the cost of merchandise purchases and expenses of doing business, current operations will provide a net source of funds. If the inflow of funds from sales is less than these outflows, operation will result in a net use of funds.

2. **Sale of non-current assets:** A business may obtain working capital by selling non-current assets such as plants and machinery etc. Sale is a source of funds regardless whether the non-current assets are sold at a gain or loss.

3. **Long-term borrowing**: Such as issue of debentures and bonds result in an increase in current assets, thereby increase in working capital.

4. **Issue of additional equity capital:** The issue of additional equity shares results in an inflow of current assets, thereby increase in working capital.

Use of Working Capital

1. Declaration of cash dividend
2. Purchase of non-current assets
3. Payment of long-term debt

Steps in preparing fund flow statement

1. Determine the changes in working capital
2. Determine the adjustments account to be made to net income
3. For each non-current account on the balance sheet establish the increase or decrease in that account. Analyse the change to decide whether it is a source (increase) or use (decrease) of working capital.
4. Ensure that the total of all sources including those from operations minus the total of all uses equals the change found in working capital in step 1.

Example 1: Prepare a Fund Flow Statement with the help of following data.

Balance Sheet as on 31st March, 2023 and 2024

Particulars	Note	31.03.23(₹)	31.03.24(₹)
I. **EQUITY AND LIABILITIES**			
1. Shareholder's Fund			
(a) Share Capital			
(i) Equity Shares of ₹ 100 each		6,00,000	7,00,000
(b) Reserves & Surplus		1,52,500	80,000
2. Non-Current Liabilities			
(a) Long-term Borrowing			
(i) Debenture		1,25,000	2,00,000
(b) Long-term Provision			
(i) Depreciation		1,30,000	1,55,800
3. Current Liabilities			
(a) Trade Payables		1,82,500	2,04,000
(b) Other Current Liabilities			
(i) Unclaimed Dividend		8,000	6,000
(c) Short-term Provision			
(i) Inventory Provision		8,000	9,500
(ii) Provision for Taxation		23,000	26,600
TOTAL		12,29,000	13,81,900

Balance Sheet as on 31st March, 2023 and 2024

Particulars	Note	31.03.23(₹)	31.03.24(₹)
II. **ASSETS**			
1. Non-Current Assets			
(a) Property, Plant & Equipment		7,80,000	8,55,000
(b) Intangible Assets			
(i) Goodwill		30,000	25,000
2. **Current Assets**			
(a) Inventories		1,95,000	2,15,900
(b) Trade Receivables		1,50,000	1,90,000
(c) Cash and Cash Equivalents		20,000	30,000
(d) Short-term Loans & Advances		50,000	60,000
(e) Other Current Assets			
(i) Debenture Discount		4,000	6,000
TOTAL		12,29,000	13,81,000

Other information:

(a) Net Loss amounted to ₹ 22,500.

(b) Debenture were issued of 5% Discount.

(c) Machinery costing ₹ 30,000 was sold for ₹ 8,000 at a profit ₹ 4,000.

(d) A running business was purchased in the year by issue of ₹ 1,00,000 shares at par. The business had machinery of ₹50,000, stock ₹ 30,000, Sundry Debtors ₹ 25,000 and Sundry Creditors ₹ 20,000.

(e) Tax paid during the year was ₹ 25,000.

(f) Proposed dividend of ₹ 70,000 for 2022-23 was paid during the year 2023-24. Proposed dividend for 2023-24 is ₹80,000.

(g) Debenture interest paid ₹ 10,000.

Solution:

Sources and Application of Fund for the year ended 31st December 2024

Sources	Amount (₹)	Application	Amount (₹)
Fund from Operation	1,05,650	Purchase of Machinery	1,05,000
Issue of Shares	1,00,000	[50,000 + 55,000] (Note 3)	
Sale of machinery	8,000	Purchase of Goodwill (Note 3)	15,000
Issue of Debenture	71,250	Payment of Dividend	72,000
		[70,000 + 2,000]	
		Payment of Tax	25,000
		Payment of Debenture Interest	10,000
		Increase in working Capital	57,900
	2,84,900		2,84,900

Statement of changes in Working Capital

Particulars	Previous year (₹)	Current Year (₹)	Effect on Working Capital	
			Increase	Decrease (₹)
Current Assets:				
Advances	50,000	60,000	10,000	
Inventories	1,95,000	2,15,900	20,900	
Trade Receivables	1,50,000	1,90,000	40,000	
Cash & Bank	20,000	30,000	10,000	
TOTAL (A)	4,15,000	4,95,900		
Current Liabilities:				
Inventory Provision	8,000	9,500		1,500
Trade Payables	1,82,500	2,04,000		21,500
TOTAL (B)	1,90,500	2,13,500		
Working Capital (A-B)	2,24,500	2,82,400		
Increase in Working Capital	57,900			57,900
	2,82,400	2,82,400	80,900	80,900

Working Notes:

Provision for Taxation A/C

Particulars	Amount ₹	Particulars	Amount ₹
To Bank	25,000	By Balance b/d	23,000
To Balance c/d	26,000	By Profit & Loss A/C	28,600
	51,600		51,600

Property, Plant and Equipment A/C

Particulars	Amount ₹	Particulars	Amount ₹
To Balance b/d	7,80,000	By Depreciation Fund	26,000
To Profit on Sale of Machinery	4,000	By Bank	8,000
To Business Purchase	50,000	By Balance c/d	8,55,000
To Bank – Cash Purchase (Balancing Figure)	55,000		
	8,89,000		8,89,000

Depreciation Fund A/C

Particulars	Amount ₹	Particulars	Amount ₹
To Building & Machinery (Accumulated Depreciation on Machine Sold)	26,000	By Balance c/d	1,30,000
		By Profit & Loss A/C	51,800
To Balance c/d	1,55,800	- Depreciation (Balancing Figure)	
	1,81,800		1,81,800

8% Debenture A/C

Particulars	Amount ₹	Particulars	Amount ₹
To Balance c/d	2,00,000	By Balance b/d	1,25,000
		By Bank	71,250
		By Debenture Discount	3,750
	2,00,000		2,00,000

Debenture Discount A/C

Particulars	Amount ₹	Particulars	Amount ₹
To Balance b/d	4,000	By Profit & Loss A/C	1,750
To 8% Debentures	3,750	- Written off (Balancing Figure)	
		By Balance c/d	6,000
	7,750		7,750

Adjusted Profit & Loss A/C

Particulars	Amount ₹	Particulars	Amount ₹
To Depreciation Fund	51,800	By Balance b/d	1,52,500
To Divided	70,000	By Profit on Sale of Machinery	4,000
To Provision for Taxation	28,600	By Fund from Operation	1,05,650
To Debenture Discount	1,750	(Balancing Figure)	
To Debenture Interest paid	10,000		
To Goodwill – Written off	20,000		
To Balance c/d	80,000		
	2,62,150		2,62,150

Notes:

1. Accumulated depreciation on machine sold:

   Original Cost + Profit on Sale – Sale Proceeds = 30,000 + 4,000 – 8,000 = ₹ 26,000

2. Goodwill acquired in business purchase:

	₹
Machinery	50,000
Stock	30,000
Debtors	25,000
	1,05,000
Less: Creditors	20,000
	85,000
Value of Shares Issued	1,00,000
Goodwill	15,000

Business Data Analytics

Data Processing, Organisation, Cleaning and Validation

Data Cleaning

Data cleaning is the process of fixing or removing incorrect, corrupted, incorrectly formatted, duplicate, or incomplete data within a dataset. It involves identifying data errors and then changing, updating or removing data to correct them.

Benefits of data cleaning

1. **Improved accuracy:** Data cleaning can help identify and fix errors, inconsistencies, and missing values.
2. **More efficient data analysis:** Clean data can help you make more informed decisions and develop strategies for business success.
3. **Reduced operational costs:** Data cleaning can help you identify and fix errors, which can help you reduce operational costs.
4. **Enhanced customer satisfaction:** Accurate data can help you ensure that your communications reach the right people, which can help you maintain your brand integrity and reputation.
5. **Better compliance and risk management:** Data cleaning can help you ensure that your data is compliant with regulations and that you're managing risk.
6. **Improved customer relationships:** Accurate data can help you better understand your audience and develop strategies to improve customer relationships.
7. Data cleaning involves identifying and addressing errors, inconsistencies, duplicates, or incomplete entries within the data

Steps of data cleaning

Step 1: Remove duplicate or irrelevant observations:

Remove unwanted observations from your dataset, including duplicate observations or irrelevant observations. Duplicate observations will happen most often during data collection.

Step 2: Fix structural errors

Structural errors are when you measure or transfer data and notice strange naming conventions, typos, or incorrect capitalization. These inconsistencies can cause mislabeled categories or classes.

Step 3: Standardizing data:

Standardizing different labels, tags, units of measure, descriptors, languages, and characteristics is crucial for a consolidated analysis. Classification, coding, and schema alignment can help.

Step 4: Filter unwanted outliers

Finding and removing unusual values that differ greatly from the rest of the data.

Step 5: Address missing data

Data input methods enable you to fill empty cells, unclassified categories, and missing entries wherever possible. You can then remove any remaining gaps.

Step 6 Validate and cross-check

Extra scrutiny, quality control, reasonability checks, accuracy testing, and cross-dataset comparisons help you validate your data's cleanliness before you use it.

Multiple Choice Questions (MCQ)

1. Data cleaning is-
   (a) Large collection of data mostly stored in a computer system
   (b) The removal of noise errors and incorrect input from a database
   (c) The systematic description of the syntactic structure of a specific database. It describes the structure of the attributes the tables and foreign key relationships.
   (d) None of the above

   Answer (b)
2. To remove noise and inconsistent data __ is needed.
   (a) Data Cleaning
   (b) Data Transformation
   (c) Data Reduction
   (d) Data Integration

   Answer (a)
3. Multiple data sources may be combined is called as ___.
   (a) Data Reduction
   (b) Data Cleaning
   (c) Data Integration
   (d) Data Transformation

   Answer (c)
4. The mapping or classification of a class with some predefined group or class is known as?
   (a) Data Characterization
   (b) Data Discrimination
   (c) Data Set
   (d) Data Sub Structure

   Answer (b)

Topic

Module 3: Marginal Costing

INTERMEDIATE

Group II - Paper-12

Management Accounting (MA)

Module 4: Applications of Marginal Costing in Short Term Decision Making

Responsibility accounting is a management control system designed to assign and evaluate performance by dividing an organization into distinct segments, each with specific responsibilities. This approach delegates authority to individuals or departments, holding them accountable for their respective areas. The organization is divided into cost centers, revenue centers, profit centers, and investment centers, each with assigned budgets. Managers are assessed based on their ability to achieve or surpass these budgeted targets.

This system encourages the decentralization of decision-making, promoting more effective and efficient management practices. It also emphasizes the importance of regular communication and feedback to ensure alignment with organizational goals. Despite its benefits, such as fostering goal alignment and efficient resource management, responsibility accounting can lead to sub-optimization, where individual goals may conflict with overall organizational objectives. In essence, responsibility accounting serves as a crucial tool for performance measurement and control within organizations.

Key Control Functions Enabled by Responsibility Accounting System

A responsibility accounting system supports organizational unit managers in five critical control functions:

Planning: This system assists in formulating plans by setting budgets and standards. It helps communicate expectations and delegate authority throughout the organization.

Data Gathering: The system organizes actual performance data in line with the planned objectives, capturing and summarizing information for each distinct unit within the organization.

Monitoring Variances: It involves regular comparisons between planned and actual data. Responsibility reports are generated for subordinate managers, showcasing actual performance against flexible budget targets.

Managerial Influence: Managers address significant variances by pinpointing their causes and implementing corrective measures. Responsibility reports often reveal operational discrepancies to top management.

Continuous Comparison and Response: The system ensures an ongoing cycle of data comparison and response. Regular analysis and corrective actions are taken to maintain alignment with organizational goals.

Assumptions of Responsibility Accounting

The responsibility accounting system is grounded in several key assumptions:

Specific areas of responsibility are defined, and managers are accountable for these defined areas.

Managers are responsible only for items and activities over which they have a significant degree of direct control.

Managers actively participate in establishing the goals or budgets against which their performance is measured.

Goals set for each area of responsibility are expected to be attainable through efficient and effective performance.

Control reports should contain significant information related to each area of responsibility.

Responsibility centre managers are expected to strive for the accomplishment of the budgets and objectives established for their respective areas of responsibility.

Responsibility Centre

A responsibility center is a distinct organizational unit or subunit within a larger organization that is headed by a manager and has its own set of responsibilities.

Responsibility centers are classified based on the nature of the responsibilities assigned to them, and they play a crucial role in responsibility accounting, which is a management control system.

There are four main types of responsibility centers:

Cost Centre: Cost centers are dedicated to cost control, with managers held accountable for overseeing and managing associated costs. Their responsibility involves maintaining the same output or service levels while efficiently managing and controlling costs within their designated centre.

Revenue Centre: Revenue centers concentrate on revenue generation, with managers tasked with the responsibility of increasing sales or revenue within their designated centre. They are accountable for implementing strategies that enhance the financial performance of their specific area.

Profit Centre or Earnings Centre: Profit centers have a dual focus on both revenue generation and cost control. Managers in profit centers bear the responsibility for ensuring the overall profitability of their centre by effectively managing both revenues and costs. Their role encompasses a holistic approach to financial performance within their designated area.

Investment Centre: In investment centers, managers are responsible for generating revenue, controlling costs, and managing invested capital. They are held accountable for the efficient use of capital and are evaluated based on financial metrics like return on investment (ROI).

Preparation of Responsibility Report

The preparation of a responsibility report is crucial for summarizing and analyzing the performance of a specific responsibility center. It compares actual outcomes with budgeted or expected figures and is integral to responsibility accounting, helping evaluate managerial performance. Here's a streamlined process for preparing a responsibility report:

Identify the Responsibility Center: Determine the specific unit or department to be evaluated.

Gather Actual Performance Data: Collect current performance data relevant to the responsibility center.

Classify Data According to Budget Categories: Organize the collected data based on the established budget categories.

Prepare a Performance Report: Create a detailed report showing actual performance against budgeted figures.

Highlight and Categorize Variances: Identify and mark variances between actual and budgeted results, noting whether they are favorable or unfavorable.

Provide Explanations for Significant Variances: Offer detailed explanations for major variances to understand their causes.

Distribute the Report: Share the report with relevant stakeholders, including managers and top executives.

Evaluate Performance: Assess the performance of the responsibility center based on the report findings.

Encourage Feedback and Discussion: Promote dialogue and feedback on the report to gain insights and perspectives.

Use Insights for Continuous Improvement: Utilize the feedback and analysis to make informed decisions and drive ongoing improvements.

This structured approach ensures that responsibility reports effectively evaluate and enhance managerial performance, contributing to better decision-making and organizational efficiency.

Multiple Choice Questions (MCQs):

1. In special order pricing, which cost should be covered first?
   a) Fixed cost
   b) Sunk cost
   c) Incremental cost
   d) Opportunity cost
2. Which of the following scenarios is appropriate for using of special order pricing?
   a) When there is excess capacity
   b) When all production resources are fully utilized
   c) During a recession
   d) When launching a new product
3. The make or buy decision depends primarily on:
   a) Marginal costs and opportunity costs
   b) Sunk costs
   c) variable costs
   d) Fixed costs
4. In which condition the company has two options either continue produce product at reduced price or suspend all the production activities?
   a) pricing under normal condition
   b) pricing under special condition
   c) pricing under abnormal condition
   d) pricing under additional conditions
5. Opportunity cost represents:
   a) The total cost of a project
   b) The next best alternative forgone
   c) The cost of labor
   d) The cost of capital
6. Marginal costing focuses on covering _____ costs.
   a) Incremental cost
   b) Fixed cost
   c) Sunk cost
   d) Variable cost
7. What is the primary goal of limiting factor analysis?
   a) Minimizing fixed costs
   b) Maximizing contribution per unit of limiting factor
   c) Reducing production time
   d) Increasing sales revenue
8. In limiting factor analysis, how is profitability measured?
   a) Sales ÷ Contribution
   b) Profit ÷ Fixed Cost
   c) Contribution ÷ Key Factor
   d) Sales ÷ Variable Cost
9. What should a company focus on while choosing between alternative machines?
   a) Total fixed costs
   b) Contribution per unit of limiting factor
   c) Variable costs
   d) Total sales revenue
10. When should a machine with higher variable costs and lower fixed costs be used?
    a) When the production level is low
    b) When the production level is high
    c) When fixed costs are irrelevant
    d) When labor costs are the limiting factor
11. In replacement decisions, which of the following is irrelevant to decision-making?
    a) Variable costs

b) Fixed costs

c) Sunk costs

d) Contribution margin

12. How is the cost indifference point calculated between two machines?

a) Difference in variable cost ÷ Difference in fixed cost

b) Difference in fixed cost ÷ Difference in variable cost

c) Total variable cost ÷ Total fixed cost

d) Total fixed cost ÷ Total variable cost

Answer:

1	2	3	4	5	6	7	8
c	a	a	c	b	a	a	c
9	10	11	12				
b	a	c	b				

Fill in the Blanks:

1. Special order pricing is relevant when there is __________ capacity in production.

2. The make or buy decision involves considering __________ costs and opportunity costs.

3. Contribution is maximized by earning the highest __________ per unit of the limiting factor.

4. The __________ is used to determine which machine should be chosen.

5. The __________factor could be labor, material, or machine hours.

Answer:

1	excess	2	marginal
3	Contribution	4	Cost indifference point
5	limiting		

True/False Questions:

1. Marginal costing is primarily concerned with long-term decision-making.

2. Special order pricing should always cover at least the incremental costs to be profitable.

3. The contribution margin is irrelevant in deciding between alternatives.

4. Opportunity cost represents the fixed costs that a company incurs in production.

5. In make or buy decisions, outsourcing is always more cost-effective than producing in-house.

Answer:

1	2	3	4	5
F	T	F	F	F

Cost–Volume–Profit Analysis

Concept

Cost-Volume-Profit (CVP) Analysis is a technique used for measuring the functional relationships between the major factors affecting profits, and for determining the profit structure of the firm.CVP analysis can also be used to calculate the contribution margin. The contribution margin is the difference between total sales and total variable costs. For a business to be profitable, the contribution margin must exceed total fixed costs. The contribution margin may also be calculated per unit (per product).

Use of CVP Analysis in Decision Making:

CVP analysis is used as an evaluation tool for managerial decisions. The important uses to which cost-volume profit analysis are:

a) Forecasting costs and profits as a result of change in Volume determination of costs, revenue and variable cost per unit at various levels of output

b) Fixation of sales Volume level to earn or cover given revenue, return on capital employed, or rate of dividend

c) Determination of effect of change in Volume due to plant expansion or acceptance of order, with or without increase in costs or in other words, determination of the quantum of profit to be obtained with increased or decreased volume of sales

d) Determination of comparative profitability of each product line, project or profit plan

e) Suggestion for shift in sales mix

f) Determination of optimum sales volume

g) Evaluating the effect of reduction or increase in price, or price differentiation in different markets

h) Highlighting the impact of increase or decrease in fixed and variable costs on profit

i) Studying the effect of costs having a high proportion of fixed costs and low variable costs and vice-versa

j) Inter-firm comparison of profitability

Break even analysis helps is ascertaining the level of production where total costs equals to total revenue. Below this level of production, there are losses and above this point depicts the profit zone. Like marginal costing this analysis is also based on cost classification into fixed and variable costs. Break even analysis helps in measuring the effect of charges in volume, costs, selling price and product mix on profit. In fact, break even analysis is cost-volume profit analysis. Break-even point can be determined both mathematically (equation technique and contribution margin technique) and graphically. It is expressed in terms of units or invalue terms. This technique is very useful in profit planning and decision making. It can be applied to estimate profits at a given sales volume, sales volume required to earn a desired profit, calculating sale volume required to offset price reduction, ascertaining the margin of safety, measuring the effect of changes in profit factors etc. The other tools in this analysis are profit-volume ratio, margin of safety and angle of incidence. There are inherent limitations in the break-even analysis –classification of costs into fixed and variable costs, fixed costs remains fixed, variable cost per unit is constant, selling price per unit is constant etc. In spite of its limitation the break-even point is a useful technique in decision making if it used by those who understand its limitations.

Multiple Choice Questions (MCQs):

1. In cost-volume-profit analysis, profit is determined by
   a) Sales Revenue x P/V ratio - Fixed Cost
   b) Sales units x contribution per unit - fixed costs
   c) Total contribution - Fixed cost
   d) All the above

2. Variable costs per unit
   a) Goes on increasing with production
   b) Goes on decreasing with production
   c) Remains constant with change in production
   d) None of these

3. Variable cost are those costs which
   a) Are directly apportioned to cost unit or cost centre
   b) Varies directly with production
   c) Depends upon the demand
   d) Depends upon the sale

4. The contribution per unit is ₹2 and fixed costs are ₹15,000for earning a profit of ₹50,000, the company must have sales of
   a) ₹1,30,000
   b) ₹1,00,000
   c) 32,500 units
   d) ₹32,500

5. Margin of safety is expressed as
   a) Profit / P/V ratio
   b) (Actual sales – sales at BEP) / Actual sales
   c) Actual sales – Sales at BEP
   d) All of the above
6. The margin of safety point lies
   a) To the left of break-even point
   b) To the right of break-even point
   c) On break-even point
   d) Cannot be determined
7. The sale at a BEP for a firm is ₹ 4,80,000 and the actual salesmade by the firm ₹ 8,00,000, the margin of safety will be
   a) ₹ 12,80,000
   b) ₹ 3,20,000
   c) ₹ 8,00,000
   d) ₹ 800,000
8. The profit of a company is ₹ 30,000 by selling 10,000 unitsat a price of ₹ 10 per unit. The variable cost to sale ratio is 60per cent. Find margin of safety level.
   a) ₹ 75,000
   b) ₹ 30,000
   c) ₹ 1,00,000
   d) ₹ 12,000
9. P/V ratio is
   a) Profit/volume
   b) Contribution/sales
   c) Profit/contribution
   d) Profit/sales
10. Profit - volume ratio is improved by reducing
    a) Variable cost
    b) Fixed cost
    c) Both of them
    d) None of them
11. The price reduction policy, _____ the P/V ratio and _____ thebreak-even point
    a) Reduces, reduces
    b) Reduces, increases
    c) Increases, reduces
    d) Increases, increases
12. Shut down point occurs when
    a) Net profit is zero
    b) Sale revenue - variable cost + fixed costs
    c) Losses are greater than fixed cost
    d) None of the above
13. The sales of a firm is ₹ 3,00,000, fixed cost is ₹90,000, andvariable costs are ₹ 2,00,000, the break-even point will occurat
    a) 2,70,000 units
    b) ₹ 2,70,000
    c) ₹ 3,25,000
    d) 3,25,000 units
14. The break even points in units is equal to
    a) Fixed cost/PV ratio
    b) Fixed cost x sales/total contribution
    c) Fixed cost/contribution per unit
    d) Fixed cost/total contribution
15. At the break-even point, which equation will be true.

a) Variable cost - fixed cost = contribution

b) Sales = variable cost + fixed cost

c) Sales – fixed cost = contribution

d) Sales – contribution = variable cost

Answer:

1	2	3	4	5	6	7	8
d	c	b	c	d	c	b	a
9	10	11	12	13	14	15	
b	a	b	c	b	c	b	

True and False

1. At break-even point contribution equals to fixed cost.
2. Profit volume graph shows profit or loss at different levels ofsales.
3. P/V ratio can be improved by decreasing the selling price.
4. P/v ratio can be improved by reducing the fixed costs.
5. Margin of safety may be improved by increasing selling priceand reducing fixed cost

Answer:

1	2	3	4	5
T	T	F	F	T

Fill in the blanks

1. Break Even Point is the level of saleswhere total costsequal to total revenue or ____________ point.
2. ___________ analysis is technique to study the effects of costs andvolume variations on profit.
3. __________ is the difference between actual sales and sales at break-even point.
4. Profit Volume Ratio is a relationship between ____________ to sales.
5. _______ are those costs which has both fixed and variable elements.

Answer:

1	No profit no loss	2	Cost-volume-Profit
3	Margin of Safety	4	Contribution
5	Mixed Costs		

CMA FINAL COURSE

Syllabus 2022

Topic

Module 5: The Competition Act, 2002

FINAL

Group III - Paper-13

Corporate and Economic Laws (CEL)

COMPETITION ACT, 2003

Competition Act, 2003

- The Monopolies & Restrictive Trade Practices Act, 1969 is the first enactment to deal with competition issues and came into effect on 1st June 1970.
- Under the Act, Competition Commission of India and the Competition Appellate Tribunal have been established.

Objectives of the Act

The objectives of the Competition Act are to:

- prevent anti-competitive practices,
- promote and sustain competition,
- protect the interests of the consumers and
- ensure freedom of trade.
- competition advocacy at various levels at Government, industry and consumers.

The objectives of the Act are sought to be achieved through the instrumentality of the Competition Commission of India (CCI) which has been established by the Central Government with effect from 14th October, 2003. CCI is a body corporate and shall have a full time chairman with minimum 2 and maximum 6 to 7 members.

Functions of Competition Commission of India (CCI)

i) CCI shall prohibit anti-competitive agreements, which determine prices, limit or control markets, bid rigging etc.

ii) Abuse of dominance, through unfair or discriminatory prices or conditions, limiting or restricting production or development, denying market access etc. and regulate combinations (merger or amalgamation or acquisition) which cause or likely cause an appreciable adverse effect or competition through a process of enquiry.

iii) It shall give opinion on competition issues on a reference received from an authority established under any law (statutory authority)/Central Government.

iv) CCI is can undertake competition advocacy, create public awareness, promote competition, protect interest of consumers and ensure freedom of trade and impart training on competition issues.

v) Inquiry into certain agreements and dominant position by giving notices to the parties.

"Agreement" under the Act

An agreement includes any arrangement, understanding or concerted action entered into between parties. It need not be in writing or formal or intended to be enforceable in law.

1.4 Prohibition of certain agreement

A. Anti-competitive agreement shall be presumed to have appreciable adverse effect on competition and thereby deemed to be restrictive.

- An anti-competitive agreement is an agreement having appreciable adverse effect on competition. Anti-competitive agreements include:-
    - agreement to limit production & supply, storage, distribution
    - agreement to allocate markets
    - agreement to fix price
    - bid rigging (manipulating the bids) or collusive bidding (bidding with understanding among the bidders)
    - conditional purchase/sale (tie-in arrangement)
    - exclusive supply/distribution arrangement-limit/restrict/withhold/allocation of an area
    - resale price maintenance
    - refusal to deal

The whole agreement shall be construed as "void" if it contains anticompetitive clauses. However, agreement for restriction for protection of intellectual property shall not fall under this category.

Abuse of dominance

Dominance refers to a position of strength which enables a dominant firm to operate independently in India of competitive forces or to affect its competitors or consumers or the market in its favour.

(i) impedes fair competition between firms,

(ii) exploits consumers and makes it difficult for the other players to compete with the dominant undertaking on merit.

(iii) imposing unfair conditions or price, predatory pricing, limiting production/market, creating barriers to entry and applying dissimilar conditions to similar transactions.

Specific instances of dominance in Competition Act

(a) directly or indirectly, imposes unfair or discriminatory conditions in purchase or sale of goods or services, including predatory price;

(b) limits, restricts production of goods/ provision of services/ technical development

(c) denial of market access

(d) uses dominant positioning one market to enter into other relevant market.

Who can make a complaint

- Any person, consumer, consumer association or trade association can make a complaint against anti-competitive agreements and abuse of dominant position.
- A **person** includes an individual, Hindu Undivided Family (HUF), company, firm, association of persons (AOP), body of individuals (BOI), statutory corporation, statutory authority, artificial juridical person, local authority and body incorporated outside India.
- A consumer is a person who buys for personal use or for other purposes.

Orders the Commission can pass

- During the course of enquiry, the Commission can grant interim relief restraining a party from continuing with anti competitive agreement or abuse of dominant position
- To impose a penalty of not more than 10% of turnover of the enterprises and in case of cartel - 3 times of the amount of profit made out of cartel or 10% of turnover of all the enterprises whichever is higher
- After the enquiry, the Commission may direct a delinquent enterprise to discontinue and not to re-enter anti-competitive agreement or abuse the dominant position
- To award compensation
- To modify agreement
- To recommend to the Central Govt. for division of enterprise in case it enjoys dominant position.

* Declare an agreement to be void.

* Violation of orders may result to imprisonment.

"Combination" under the Act and regulation thereof

Combination includes acquisition of shares, acquisition of control by the enterprise over another and amalgamation between or amongst enterprises.

Combination, that exceeds the threshold limits specified in the Act in terms of assets or turnover, which causes or is likely to cause an appreciable adverse effect on competition within the relevant market in India, can be scrutinized by the Commission

In case of combination the threshold limits are-

 For acquisition –

- enterprise level:

Combined assets of the firms (acquirer and the enterprise) is more than Rs 2000 Cr. or turnover is more than Rs 6000 Cr. (these limits are US$ 1 billion including at least ₹1000 Cr. in India and 3 billions including at least 3000 cr. in India in case one of the firms is situated outside India).

Group level:

- The limits are more than Rs 8000 Cr or Rs 24000 Cr and US$ 4 billion including at least ₹1000 Cr. in India and 12 billions including at least ₹3000 Cr. in India in case acquirer is a group in India or outside India respectively.

CG has exempted enterprise whose control, shares, voting rights or assets are being acquired has assets of value of not more than ₹350 Cr. and turnover of not more than ₹1000 Cr. both in India.

Turnover means amount on sale of product or rendering of services of similar or substitutable goods or services. Group means two or more enterprise which directly or indirectly exercise 26% or more of voting right in other enterprise or appoint more than 50%of the directors or control affairs of the other enterprise.

Limits for merger/amalgamation

- the above limit will be valid for mergers also.

Asset means written down book value and shall include intellectual property.

A firm proposing to enter into a combination, may, at its option, notify the Commission in the specified form disclosing the details of the proposed combination within 30 days of such proposal i.e. approval of the board of directors or execution of the agreement or other document for acquisition. No combination shall come into effect until 210 days have passed from the day on which the notice has been given to the Commission or Commission has given no objection, whichever is earlier.

Procedure for investigation of combinations

If the Commission is of the opinion that a combination is likely to cause or has caused adverse effect on competition,

- It shall issue a notice to show cause the parties as to why investigation in respect of such combination should not be conducted.
- On receipt of the response, if Commission is of the prima facie opinion that the combination has or is likely to have appreciable adverse effect on competition, it may direct publication of details inviting objections of public and hear them, if considered appropriate.
- It may invite any person, likely to be affected by the combination, to file his objections. The Commission may also enquire whether the disclosure made in the notice is correct and combination is likely to have an adverse effect on competition.

Orders the Commission can pass in case of combinations

- It shall approve the combination if no appreciable adverse effect on competition is found
- It shall disapprove of combination in case it forms an opinion of appreciable adverse effect on competition
- May propose suitable modification in the agreement / arrangement.

Prohibition of abuse of dominance

i) an enterprise shall be considered to be dominant in the referent market in India, if -

   (a) operate independently of competitive forces;

   (b) affects the consumer, competitor or the relevant market in its favour.

ii) abuse of dominant position shall mean using of unfair or discriminatory condition in purchase or sale or price of goods and services or restricting quality of production, services or scientific development to prejudice customers, denial of market access, supplementary obligations or predatory pricing.

Regulation of combinations

i) no person shall enter into combination which causes or likely to cause appreciable adverse effect on competition in the relevant market in India;

ii) persons propose to enter into combination shall give notice to the Commission with 30 days of approval of the proposal by the Board or execution of any agreement;

iii) no combination shall be effective before lapse of 210 days of giving notice or getting approval of the Commission, whichever is earlier;

iv) do not apply to bank, FI, FII or venture capital fund. 7 days notice needs to be given to Commission.

Topic

Module 3: Leasing Decisions and

Module 17: Digital Finance

FINAL

Group III - Paper-14

Strategic Financial Management (SFM)

Topic: Leasing Decisions

- **Multiple Choice Questions**

1. A _________ is a lease that transfers substantially all the risks and rewards incidental to ownership of an asset.

    A. Finance Lease

    B. Operating Lease

    C. Leverage Lease

    D. None of the above

2. In case of a _________, the lease period covers substantial life of the asset and hence the lease is found to be of long term in nature.

    A. Finance Lease

    B. Operating Lease

    C. Leverage Lease

    D. None of the above

3. Which of the following is/are the limitation(s) of leasing?

    A. Restrictions on use

    B. High Pay-out

    C. No ownership for lessee

    D. All of the above

4. Which of the following is/are the advantage(s) of leasing to lessor?

    A. Full Security

    B. Tax benefits

    C. Trading on equity

    D. All of the above

5. Which of the following is/are the advantage(s) of leasing to lessee?

    A. Source of financing

    B. Less risk

    C. Tax benefits

    D. All of the above

6. _____________ refers to a lease agreement wherein the lessor acquires an asset partially financed by the financial institutions and lease out the same to the lessee for the agreed lease payments.

    A. Leveraged lease

    B. Finance lease

    C. Operating Lease

    D. Foreign lease

Answer:

1-A; 2-A; 3-D; 4-D; 5-D; 6-A

Comprehensive Problems

A company wishes to acquire an asset costing ₹ 1,00,000. The company has an offer from a bank to lend @ 18%. The principal amount is repayable in equal five year end instalments. A leasing company has also submitted a proposal to the company to acquire the asset on lease at year end rentals of ₹ 280 per ₹ 1,000 of the asset value for 5 years. The asset's life is estimated at 5 years with residual value of ₹ 10,000 and the cost net of residual value is depreciated equally each year over its life. Assume that this is the only asset of its class so that at the end of the 5th year there will be a capital gain or loss with 20% tax effect when the asset is sold. The tax rate of the company is 50%.

For what minimum sale value of the asset at the end of the 5th year will the decision to borrow and own the asset be preferred to leasing? Present annual cash flows and arrive at the discounted cash flows for each year showing salvage value separately. Use PV factors as provided. Round off calculations to the nearest rupee. Assume cash flows on interest and taxes also at year ends.

Solution:

Lease Rental = 28000 before tax = 14000 after tax

14000 x annuity factor 3.889 = 54,446 = PV of lease rentals

In a lease vs borrow evaluation, after tax cost of debt should be the PV factor

End of yr	Principal O/S	Principal Repayment	Interest	Dep^n	Interest +Dep^n	Tax Shield 50%	Cash Outflow	PV Factor 9%	PV of cash outflow
1	80000	20000	18000	18000	36000	18000	20000	0.917	18340
2	60000	20000	14400	18000	32400	16200	18200	0.842	15324
3	40000	20000	10800	18000	28800	14400	16400	0.772	12661
4	20000	20000	7200	18000	25200	12600	14600	0.708	10337
5	0	20000	3600	18000	21600	10800	12800	0.650	8320
Total									64982

Assuming X is the sale value on sale of the asset at the end of the 5th year

64982- [X-0.2 {X-10000}] < 54446 to justify purchase by loan

- [X – 0.2X + 2000] X PV factor 0.65 <10,536

or 0.8X + 2000 > 16,209 (i.e. 10,536/0.65)

or 0.8X = 16,209 – 2000 = 14209

or X > 17,761

For any sale value above ₹17,761, purchasing the asset out of bank borrowing is preferable

Problem 2

KJ Hospital wants to install a testing equipment. It wants to analyse whether to purchase the machine from a bank borrowing or to lease it from LR. The following information is given:

(i)	Cost of the equipment	₹ 50 lacs	to be paid at the beginning of the 1st year
(ii)	Life	5 years	
(iii)	Residual value	₹ 5 lacs	at the end of the 5th year
(iv)	Depreciation	Cost less residual value, written off equally p.a. for the life of the asset	
(v)	Annual Lease Rent	₹ 12 lacs	Payable at the end of each year from year 1 to year 5
(vi)	If asset is purchased, bank loan available at	10% interest per annum	Year-end payment includes ₹10 lacs each year towards principal and additionally, interest on the balance outstanding at the beginning of the year.
(vii)	Annual maintenance charges to be incurred by KJ if the equipment is purchased	₹ 2 lacs per annum	payable at the end of each year
(viii)	Tax rate applicable for KJ and LR	40%	Assume KJ and LR are profitable
(ix)	After-tax weighted average cost of capital	12% p.a.	For both LR and KJ
(x)	Long term capital gains tax	20%	LR (For sale value in excess of the residual value)

The lessor LR is an investor company that specializes in the leasing of various medical equipment across the country. LR would buy the equipment from its own funds, maintain the machine incurring ₹ 1 lac p.a. (year-end). LR is confident of reworking the equipment at the end of 5 years at no extra cost and finding a rural hospital which would pay ₹ 13 lacs for it at the end of the 5th year. However, for its depreciation, it would write off equal amounts each year considering (i) to (iv) as for KJ. The lessor is also a profit-making company with a 40% corporate tax rate and 20% tax rate on long term capital gains.

(a) For KJ, present statements of discounted cash flows under the options of buying the machine with borrowed funds and leasing, using the appropriate discount rate. Present year wise annual cash flows (in ₹ lacs, up to two decimal places), without netting off, arrive at the sub totals of pre-discounted cash flows for each year and then apply PV factors (up to three decimals as given) and then arrive at the total present value Use '+' for inflows and '- or ( )' for outflows.

(b) Evaluate the viability of the proposal for the lessor LR. Comment on the situation.

Solution:

Outright Purchase option

End of year	Principal Opening Balance	Inter est	Main tenance	Deprecia tion	Total Ex-penses for tax benefit	Tax shield 40%	Cash out-flow Prin+ Int + Maint	Cash Flow after tax shield	PV factor 6%	PV of cash flows
0	50									
1	40	5	2	9	16	6.4	17	10.6	0.943	-9.99
2	30	4	2	9	15	6	16	10	0.890	-8.90
3	20	3	2	9	14	5.6	15	9.4	0.840	-7.89
4	10	2	2	9	13	5.2	14	8.8	0.792	-6.96
5	0	1	2	9	12	4.8	13	8.2	0.747	-6.12
5	Salvage value							5	0.747	+3.73
Total										-36.13

Evaluation of leasing option:

End of year	1	2	3	4	5
Lease Rent	12	12	12	12	12
Tax savings	4.8	4.8	4.8	4.8	4.8
Net outflow	(7.2)	(7.2)	(7.2)	(7.2)	(7.2)

Annuity factor (6%, 5 years) = 4.212

PV of lease outflows for KJ = 4.212 × (7.2) = (30.32)

Leasing is better.

Note: Lease vs. borrow should be evaluated at after tax cost of debt, i.e. 10% × (1-40%) = 6%

Topic: Digital Finance

- **Multiple Choice Questions**

1. ____________is the delivery of traditional financial services digitally, through devices such as computers, tablets and smartphones.
   A. Digital finance
   B. Traditional finance
   C. Green finance
   D. None of the above

2. Which of the following is/ are the component(s) of digital finance?
   A. Internet
   B. Mobile telecom and digital communication suites
   C. Data centers and networks
   D. All of the above

3. Which of the following is/ are the component(s) of digital finance?
   A. Enterprise portals, platforms, systems, and software
   B. Cloud services
   C. Operational security, user identity and data encryption
   D. All of the above

4. What is the full form of API?
   A. Application Programming Interface
   B. Apprenticeship Programming Interface
   C. Architecture Programming Interface
   D. Archaeological Programming Interface

5. What is the full form of CBDC?
   A. China Based Digital Currency
   B. Central Bank Digital Currency
   C. Crypto Based Digital Currency
   D. Counter Based Digital Currency

Answer:

1-A; 2-D; 3-D; 4-A; 5-B

Topic

Module 2: Tax Management, Return and Assessment Procedure

FINAL

Group III - Paper-15

Direct Tax Laws and International Taxation (DIT)

Tax Planning, Tax Evasion and Tax Avoidance

Tax law reflects the complexity of modern life and the multitude of choices and options available to all taxpayers when legitimately seeking to structure their affairs. This necessary offer of options within tax legislation creates the opportunity for choice on the part of the tax payer and means that determining the right amount of tax (but no more) that they seek to pay does necessarily requires the exercise of judgement on occasion. So long as the exercise of that judgement seeks to ensure that the taxpayer makes choices that exercise options clearly allowed by law and that they do not exploit unintended loopholes created between laws then that process of a taxpayer choosing how to structure their affairs is the process of tax planning, which is a legitimate, proper and socially acceptable act.

Thus, tax planning is a systematic evaluation of finances and investments, to reduce the tax burden in a legitimate way. It involves understanding the tax implications of various cash inflows and outflows such as salary composition, property income, home loan, investments, sale or purchase of assets, gifts and interest-bearing deposits, to draw up an appropriate investment strategy that allows realization of financial goals while at the same time reducing tax liability to minimum.

Tax planning involves analyzing finances from a tax perspective to ensure maximum tax efficiency. It helps individuals and businesses to reduce tax liability and ensure that they contribute to the economy through legal means.

It is a way to reduce tax liability by taking full advantages provided by the Act through various exemptions, deductions, rebates & relief. In other words, it is a way to reduce tax liability by applying script & moral of law. The two basic approaches of tax planning are:

1. *Reducing taxable income*: As a rule, higher the income or profit, higher the tax liability on such income or profit. Gross income is total profits or income from all sources, and taxable income is such gross income less adjustments allowable under various tax laws and other provisions. Such adjustments bases itself on the nature of income and expenditure. Opting for the income or expenditure heads that allows maximum set-offs from the gross income reduces taxable income, and by extension tax liability.

2. *Deferring payment of taxes to the extent possible*: An underestimated dimension of tax planning is timing investments and financial transactions so that the tax liability for such transactions arises at the farthest possible time. While this does not reduce the amount of tax payable, it delays tax outgo, thereby effectively providing interest-free cash on hand. Individuals may not need to resort to such a strategy, but delayed pay-out is valuable for small businesses that very often face cash flow difficulties.

The goal of tax planning is to arrange your financial affairs so as to minimize your taxes. It is the planning so as to attract minimum tax liability or postponement of tax liability for the subsequent period by availing various incentives, concessions, allowance, rebates and relief provided in the Act

Objectives of Tax Planning

Tax planning is an exercise undertaken to minimize tax liability through the best use of all available allowances, deductions, exclusions, exemptions, etc. The objectives of tax planning cannot be regarded as offending any concept of the taxation laws and subjected to reprehension of reducing the inflow of revenue to the Government's coffer, so long as the measures are in conformity with the statue laws and the judicial expositions thereof. The basic objectives of tax planning are:

a. *Reduction of Tax liability*

Tax law provides multiple choices and options to taxpayers. This necessary offer of options within tax legislation creates the opportunity for choice on the part of the tax payer. However, due to lack of awareness of legal requirements, in many a cases, a taxpayer may suffer heavy taxation. Through proper tax planning and awareness, a tax payer may reduce such heavy tax burden.

b. *Minimisation of litigation*

In the matter of taxation, the tax payers will try to pay the least tax and on the other hand, the tax administrator will attempt to extract the maximum. This conflict

behaviour may results into litigations. However, where proper tax planning is adopted by the tax payer in conformity with the provisions of the taxation laws, the incidence of litigation can be minimised. This saves him from the hardships and inconveniences caused by the unnecessary litigations.

c. *Productive investment*

A tax payer may reduce heavy tax burden through proper tax planning. Such reduction results into reduction in cash-outflow. In the days of credit squeeze and dear money conditions, even a rupee of tax decently saved may be taken as an interest-free loan from the Government, which perhaps, an assessee need not repay. Such retained cash can be utilised in other productive venture which also provide additional earning to the taxpayer. That means, proper tax planning is a measure of proper utilisation of available resources which in turn maximise the cash-inflow and minimise the tax burden.

d. *Healthy growth of economy*

The growth of a nation's economy is synonymous with the growth and prosperity of its citizens. In this context, a saving of earnings by legally sanctioned devices fosters the growth of both, because savings by dubious means lead to generation of black money, the evils of which are obvious. Conversely, tax-planning measures are aimed at generating white money having a free flow and generation without reservations for the overall progress of the nation. Tax planning assumes a great significance in this context.

e. *Economic stability*

Tax planning results in economic stability by way of:

(i) productive investments by the tax payers; and

(ii) harnessing of resources for national projects aimed at general prosperity of the national economy and reaping of benefits even by those not liable to pay tax on their incomes.

Essentials of Tax Planning

Following are the essentials of tax planning:

- Uptodate Knowledge of tax laws alongwith circulars, notifications, clarifications and Administrative instructions issued by the CBDT.
- Disclosure of full and true material information
- Avoid sham transactions or make-believe transactions or colourable devices
- Foresight of future development or changes and enterprise's goal.

Types of Tax Planning

The tax planning exercise ranges from devising a model for specific transaction as well as for systematic corporate planning. These are:

(a) *Short-range and long-range tax planning:* Short-range planning refers to planning to achieve some specific or limited objective of particular fiscal year. E.g., an individual assessee whose income is likely to register unusual growth in particular year as compared to the preceding year, may plan to subscribe to the PPF/ NSC's within the prescribed limits in order to enjoy substantive tax relief. By investing in such a way, he is not making permanent commitment but is substantially saving in the tax. Long-range planning on the other hand, involves entering into activities, which may not pay-off immediately. E.g., when an assessee transfers his equity shares to his minor son he knows that the Income from the shares will be clubbed with his own income. But clubbing would also cease after his son attains majority.

(b) *Permissive tax planning*: Permissive tax planning is tax planning under the express provisions of tax laws. Tax laws of our country offer many exemptions and incentives.

(c) *Purposive tax planning*: Purposive tax planning is based on the basis of circumvention of the law. The permissive tax planning has the express sanction of the Statute while the purposive tax planning does not carry such sanction. E.g., If an assessee manages his affairs in such a way that his income is taxable in hands of other person without attracting clubbing provision, such a plan would work in favour of the tax payer because it would increase his disposable resources.

Ethical way of reducing tax

Tax planning is an art of logically planning one's financial affairs, in such a manner that benefit of all eligible provisions of the taxation law can be availed effectively so as to reduce or defer tax liability. As tax planning follows an honest approach, by conforming to those provisions which fall within the framework

of the taxation law. However, many time in the name of planning, assessee misleads the law, with / without making an offence. And to do so, the tax payer uses any scheme or arrangement, which reduces, defers and even completely prevents the payment of tax. This may also be done by shifting of tax liability to another person, so as to minimise the incidence of tax.

Tax evasion is the illegal way to reduce tax liability by deliberately suppressing income or sale or by increasing expenses, etc., which results in reduction of total income of the assessee. Dishonest taxpayers try to reduce their taxes by concealing income, inflation of expenses, submitting misleading information, falsification of accounts and willful violation of the provisions of the Income-tax Act. Such unethical practices often create problems for the tax evaders. Tax department not only imposes huge penalties but also initiate prosecution in such cases. It is illegal, both in script & moral. It is the cancer of modern society and work as a clog in the development of the nation. It is a grave problem in a developing country like ours as it leads to a creation of a 'resource crunch' for developmental activities of the State.

Tax avoidance is an exercise by which the assessee legally takes advantages, with malafide motive, of loopholes in the Act. Tax avoidance is minimizing the incidence of tax by adjusting the affairs in such a manner that although it is within the four corners of the laws, it is done with a purpose to defraud the revenue. It is a practice of dodging or bending the law without breaking it. It is a way to reduce tax liability by applying script of law only. E.g. if A gives gift to his wife, the income from the asset gifted will be clubbed in the hand of A. But to avoid this clubbing provision "A" decides to give gift to B's wife and B reciprocates it by giving gift to A's wife. This is not tax planning but tax avoidance. Most of the amendments are aimed to curb such loopholes.

The Direct Taxes Enquiry Committee (Wanchoo Committee) has tried to draw a distinction between the two items in the following words.

"The distinction between 'evasion' and 'avoidance', therefore, is largely dependent on the difference in methods of escape resorted to. Some are instances of merely availing, strictly in accordance with law, the tax exemptions or tax privileges offered by the government. Others are maneuvers involving an element of deceit, misrepresentation of facts, falsification of accounting calculations or downright fraud. The first represents what is truly tax planning, the latter tax evasion. However, between these two extremes, there lies a vast domain for selecting a variety of methods which, though technically satisfying the requirements of law, in fact circumvent it with a view to eliminate or reduce tax burden. It is these methods which constitute "tax avoidance".

The Royal Commission on Taxation for Canada has explained the concept of tax avoidance as under:

"Tax Avoidance" will be used to describe every attempt by legal means to prevent or reduce tax liability which would otherwise be incurred, by taking advantage of some provisions or lack of provisions of law. It excludes fraud, concealment or other illegal measures.

Distinguish between Tax Planning, Tax Evasion, Tax Avoidance and Tax Management

Difference between tax planning, tax avoidance, tax evasion & tax management

Points of distinction	Tax planning	Tax Avoidance	Tax Evasion	Tax Management
Definition	It is a way to reduce tax liability by taking full advantages provided by the Act through various exemptions, deductions, rebates & relief.	It is an exercise by which the assessee legally takes advantage of the loopholes in the Act.	It is the illegal way to reduce tax liability by deliberately suppressing income or sale or by increasing expenses, etc., which results in reduction of total income of the assessee.	It is a procedure to comply with the provisions of the law.

Feature	Tax planning is a practice to follow the provisions of law within the moral framework.	Tax avoidance is a practice of bending the law without breaking it.	Tax evasion is illegal, both in script & moral.	It is implementation or execution part of taxation department of an organisation.
Object	To reduce tax liability by applying script & moral of law.	To reduce the tax liability to the minimum by applying script of law only	To reduce tax liability by applying unfair means.	To comply with the provisions of laws.
Approach	It is futuristic and positive in nature. The planning is made today to avail benefits in future.	It is futuristic but short term in nature, as loophole of the law will be corrected in future by amendments of the law.	It is concerned with past and applied after the liability of tax has arisen. It is done with negative approach to avail benefits by killing the moral of law.	It is a continuous approach, which is concerned with past (rectification, revisions etc.), present (filing of return, etc.) & future (corrective action).
Benefit	Generally, arises in long run.	Generally, arises in short run.	Generally, benefits do not arise but it causes penalty and prosecution.	Penalty, interest & prosecution can be avoided.
Treatment of Law	It uses benefits of the law.	It uses loopholes in the law.	It overrules the law.	It implements the law.
Practice	It is tax saving.	It is tax hedging.	It is tax concealment.	It is tax administration.
Need	It is desirable	It is avoidable	It is objectionable	It is essential.
Morality	It is moral in nature.	It is immoral in nature	It is illegal.	It is duty.

Conclusion

Tax planning is a continuous process that requires staying updated on changing tax laws and revising financial strategies accordingly. By taking a proactive approach, individuals and businesses can not only minimize their tax liability but also ensure financial health and stability.

Topic

Module 6: Linear Programming

FINAL

Group III - Paper-16

Strategic Cost Management (SCM)

Linear Programming

1.0 Introduction

Linear Programming is an optimization technique. It is "a technique for specifying how to use limited resources or capacities of a business to obtain a particular objective, such as least cost, highest margin or least time, when those resources have alternate uses".

A linear programming problem has three basic components.

a. **Decision Variables** are the physical quantities controlled by the decision maker and represented by mathematical symbols. As example we can say that xi is the number of units of product i that can be produced by an organization in a particular month. Decision variables can take any one of a set of possible values.

b. **Objective Function** defines the criteria for evaluating the solution. It is a mathematical function of the decision variables. For example, the objective function may measure the profit or cost as a function of the quantities of various products produced by an organization. Also it specifies a direction of optimization – to maximize some return (e.g Profit) or to minimize some cost (e.g production cost, investment cost etc.)

c. **Constraints** are a set of functional inequalities or equalities that represent physical, economic, technological or other restrictions under which optimization is to be accomplished. For example, constraints might ensure that no more input is used than is available.

2.0 Essentials of Linear Programming

a. **Decision variables and their relationship** must be linear.

b. **Well defined Objective Function** is essential for any Linear Programming Problem (LPP). This may be to optimize that means either to maximize sales, contribution or profit or to minimize the cost by utilizing the available scarce resources.

c. **Presence of constraints or restrictions** is inherent part of any situation. It must be limitations on availability of resources or otherwise. These can be expressed as linear equations or inequalities

d. **Alternative courses of action:** It must be possible to make a selection between various combinations of the productive factors.

e. **Non negativity constraints**: All the decision variables must assume non negative values because these variables represent physical quantities which cannot be negative.

f. **Linearity**: Both the Objective Function and the constraints must be expressed as linear equation or inequality, as the case may be.

g. **Finiteness**: The number of decision variables and constraints must be finite.

h. **Additivity**: The sum of the resources used by different activities must be equal to the total quantity of resources individually and collectively.

i. **Divisibility**: This implies that the solutions need not be in whole numbers. Rather they are divisible and may take any fractional value.

j. **Deterministic**: Conditions of certainty is assumed to exist. In other words, the coefficients of the decision variables in both Objective Function and Constraints are completely known and do not change during the period of study i.e the coefficients are deterministic in nature.

3.0 Advantages of Linear Programming

a. Any LPP formulated properly gives a clear picture of the true problem.

b. Due consideration is given to all possible solutions of the problem.

c. Better and more successful decisions can be made by using linear programming method and with the proper formulation of LPP

d. It always show the limitations and restrictions under which one has to operate.

e. Any plan arrived at through Linear Programming can always be reevaluated based on the changing conditions.

f. It highlights any bottleneck in the production process.

g. It facilitates optimal use of productive factors as well as best use of the existing facilities.

h. It provides flexibility in analyzing a variety of multidimensional problems.

i. An information base is created that facilitates allocation of scarce resources.

4.0 Limitations of Linear Programming

Although linear programming is a very useful technique for solving optimization problems, there are certain important limitations in the application of linear programming. Some of these are discussed below:

a. The linear programming models can be applied only in those situations where the constraints and the objective function can be stated in terms of linear expressions. But in real life situations many objective functions and constraints cannot be expressed linearly.

b. In LPP, coefficients of the decision variables in the objective function and the constraint must be completely known and they should not change during the period of study. In practice it may not be possible to know all the coefficients with certainty.

c. It may give fractional valued answers of the decision variables which in some cases (like number of a specific type of car to be produced) may be redundant.

d. It will fail to give a solution if management have conflicting multiple goals.

e. LPP requires that the total measure of effectiveness and total resource usage resulting from the joint performance of the activities must be equal to the respective sums of these quantities resulting from each activity being performed individually.

f. Many real-world problems are so complex, in terms of the number of variables and relationships constrained in them, that they tax the capacity of even the largest computer.

g. It does not take into consideration the effect of time and uncertainty.

h. Parameters appearing in the LP model are assumed to be constants but in real-life situations they are frequently neither known nor constants.

5.0 Application Areas of Linear Programming

In practice linear programming has proved to be one of the most widely used technique of managerial decision making in business, industry and numerous other fields. These are listed below:

a. Industrial Applications:

- o Product Mix Problem
- o Production Scheduling.
- o Production Smoothing Problem
- o Blending Problem
- o Transportation Problem
- o Product Distribution Problem.
- o Oil refineries use LP to determine the optimal mix of products to be produced by the refinery during a given period.
- o Communication Industry uses it in solving problems involving facilities for transmission, switching, relaying etc.
- o In Rail Road Industry this can be used for optimal programming of railway freight, and train movements to handle scheduling problems.

b. Management Applications:

- o Portfolio Selection.
- o Financial Mix Strategy.
- o Profit Planning.
- o Media Selection.
- o Travelling Salesmen Problem.
- o Determination of equitable salaries.
- o Staffing problem.

c. Farm Planning

- o The particular crops to be grown or cattle to keep during a period
- o The acreage to be devoted to each, and
- o The particular production methods to be used.

d. Airline routing.

e. Diet Problems: The diet problem, one of the earliest applications of linear programming was originally used by hospitals to determine the most economical diet for patients.

f. Non-Industrial applications:

- o Urban Department.
- o Facilities Location.
- o In structural design for maximum product.
- o In balancing assembly lines.
- o In scheduling of a military tanker fleet.
- o In determining which parts to make and which to buy to obtain maximum profit margin.
- o In selecting equipment and evaluating methods of improvement that maximize profit margin.
- o In planning most profitable match of sales requirements to plant capacity that obtains a fair share of the market.
- o In design of optimal purchasing policies.

6.0 Formulation of Linear Programming Problem

The formulation of linear programming problem as a mathematical model involves the following basic steps.

Step 1: Find the key-decision to be made from the study of the solution. (In this connection, looking for

variables helps considerably).

Step 2: Identify the variables and assume symbols x_1, x_2 …… for variable quantities noticed in step 1.

Step 3: Express the possible alternatives mathematically in terms of variables. The set of feasible alternatives generally in the given situation is:

$$[(x_1, x_2); x_1 > 0, x_2 > 0]$$

Step 4: Mention the objective quantitatively and express it as a linear function of variables.

Step 5: Express the constraints also as linear equalities/ inequalities in terms of variables.

7.0 Methods of Solving Linear Programming Problems

There are two mostly used methods of finding an optimal solution of a Linear Programming Problem. These are

(1) Graphical Method

(2) Simplex Method

a. **Graphical Method**

Graphical Method is generally used for solving Linear Programming Problems having two or three variables. In fact for problems with three variables also the application of this method is rather rare. Due to this limitation of handling only a few variables, this method is not applied for solving industrial problems which normally contains more variables. This method is also having two ways:

- o Corner Point method
- o ii. Iso Profit or Cost method

b. Simplex Method

Simplex Method is applicable to any LPP. There is no theoretical restriction on the number of Decision Variables or Constraints present in a particular LPP. The computational procedure of this This method was developed in mid 1947 by George Dantzig while working on planning methods of U.S Army Air Force to have a better utilization of the scarce resources during World War II.

8.0 Duality

Every LPP is associated with another mirror image problem based on the same data. While the original problem is called Primal Problem, the other is called it's Dual problem. In-fact either problem can be considered as Primal and the other as the Dual. Actually, both the problems can be derived from each other. The format of the Simplex Method is such that when Primal is solved, the associated Dual is also solved at the same time.

Topic

Case Studies

FINAL

Group IV - Paper-17

Cost and Management Audit (CMAD)

NONE AND NOWHERE LIMITED
REVIEW OF SUPPLY CHAIN MANAGEMENT

Management of the Company asked the Management Audit Team to review the operations relating to its supply chain and report for any possible improvement in the related areas.

Brief Description: From the Uttar Pradesh Plant, Finished Goods are moved through combination of Rail/Road to hired go-downs/Bulk Handling Agents (BHA) for stocking and subsequent ex-BHA sale. Rail/Road despatches are also made for direct sales from factory (FOR) in Uttar Pradesh. **During the review period of April 2022 to February 2023**, total 918477 mt. of Urea were despatched, of which 778402 mt. through rail and balance 140075 mt. by road. Total freight paid during the period amounting to ₹ 34.5 Cr., of which ₹ 30.5 cr. was paid to Rail and balance ₹ 4 cr. to road transporters.

Network of 41 bulk handling locations with storage capacity of 65000 mt. (approx.) catering the requirement of both season and off-season supplies, on which ₹5.7 cr. (approx.) spent as rental and handling charges. The review was carried out in selective locations, since same procedure followed throughout the entity. Hence, entire process for the relevant shortcomings to be replicated for the entire function. Corrective action plans provided by the Logistic Head for implementation.

<table>
<tr><th>Observation / Recommendation / Action Plan</th><th>Impact/ Concern</th></tr>
<tr><td>Important</td><td></td></tr>
<tr><td>1. Non-recovery for cut and torn bags from transporters

Observation
• As per the agreement, the transporters are liable for theft, pilferage, non-delivery, short delivery and damages of goods in course of transportation.
• While receiving materials at warehouse, ‘Cut & Torn’ bags identified are noted on the transport challan. Recovery from transporters against any sort of miscarriage and damages identified in course of transportation were not made for the period of review.
• In course of stock transfer to Ujhani BHA during April to October 2022, 60.8 mt. (1216 bags) was reported as ‘Cut & torn’, against total stock transfer by Road 1289 mt. i.e.about 5% of total Stock transfer.

Recommendation
All the charges in relation to ‘Cut & torn’ bags should be recovered from the transporters as per agreement.

Action Plan
Logistic Team will visit major locations on monthly basis for identification of C &T for necessary recovery and the same will be reported to MD at regular intervals.</td><td>Operation/ Financial Risk
Loss by non deduction against C & T generated through transportation (approx. ₹ 50 Lacs p.a)</td></tr>
<tr><td>2. Vigilance at Weighbridge need to be strengthened

Observation
• Weighbridge operation is carried out round the clock under the supervision of one-security personnel, who reckons weight on the electronic recorder by sitting inside the room. Accordingly, close monitoring for unwanted materials kept inside the vehicle and subsequent removal, presence of person/particles on weighbridge etc. is not feasible and hence, possibility of inaccurate weighment of vehicles (loaded and empty) cannot be ruled out.</td><td>Financial/ Operational Risk
• Wrong weighment of loaded and empty vehicle and possibility of excess supply</td></tr>
</table>

Observation / Recommendation / Action Plan	Impact/ Concern
• Physical verification carried out on 12th March,2023 revealed variation in tare weight ranging 10 - 20 Kg. on placement of vehicle at different spots. The ideal placement point of vehicles on Weighbridge is not earmarked. • The weighing scale license under Standard of Weights & Measures Act expired on 08th March, 2023. However, renewal was not done till the time of review in end March 2023. **Recommendation** • Proper placement spots for different sizes of vehicle on weighbridge need to be marked to ensure correct weighment. • To avoid penal action, weighbridge licence needs to be renewed timely i.e before expiry. • System controls needs to be in place to monitor vehicle weighment process. **Action Plan** • Marking on the weighbridge for the truck to stand in a standard predefined location for weighment will be done by 20.04.2023. • For ensuring that correct numbers of bags are loaded into the trucks following system will be made, which we propose to institutionalise by incorporating in our ISO Processes by 31.07.2023. When the loading of the truck starts, DCS operator will note down initial reading of Data Logger and when truck is loaded with 320 bags then he will stop the machine from control room and note down the reading of the data logger. The no. of bags loaded into the truck to be matched with the tally sheet of the tally clerk. This ensures that no extra bags can be loaded into the truck. • In case of any deviation in the tare and final weight, the truck is called back and physically all the bags are unloaded and reloaded.	• About 9000 trucks resulted in 900 mt. i.e. ₹ 40 Lacs
3. Security Deposit of Shahjanpur BHA yet to be received **Observation** • As mentioned in the signed agreement, the BHA is required to pay security deposit against the reserve capacity of stock. However, Security Deposit in relation to Shahjahanpur BHA yet to be received till date despite the BHA is operating since 2020-21. • The BHA is operating on pro-tem basis and the agreement renewed twice with six monthly intervals. Incidentally, the same agency is also engaged at Bareily and Ujhani. • Total stock of Urea as at end February 2023 available with Shahjanpur BHA was 1568.30 mt.(₹ 230 Lacs). **Recommendation** Security deposit needs to be recovered from handling charges bill of the relevant BHA. **Action Plan** The party was appointed on ad-hoc basis due to change required urgently at Shahjahanpur. The party also agreed to work on same terms and conditions only for ad-hoc period. We are in process of negotiating rates with party and once we are through with this, annual agreement will be done and security will be collected. We will be doing this by 31st May, 2023.	**Operation/ Financial Risk** Non-adherence to Company policy

<table>
<tr><th>Observation / Recommendation / Action Plan</th><th>Impact/ Concern</th></tr>
<tr><td>

4. Deviations from the reverse auction of Primary transport resulted in additional expenditure

Observation

- Reverse auction was conducted in February 2022 under 'Metaljunction' platform, for which the business paid fees amounting to ₹ 25 Lacs.
- After reverse auction, contract was not awarded to lowest bidders 'M/s Suraj Transport company' and 'M/s New Beopari Transport company', while the same continued with regular transporters viz. M/s Laltesh Transport, M/s Gramin society and M/s Balaji Transport. **Reason for non-allotment to lowest bidders was not documented.**
- Pre-bidding signed off contract note specifies that 'the quoted rates will be revised only if the increase/decrease in HSD rates is more or equal to 10%(cumulative in a year)'. However, contrary to the above, the agreement with the transporters specifies that 'quoted rates of transportation shall be revised only if the increase/decrease in HSD rates is more or equal to 2%. G.M (Agri Business) approved such subsequent changes as per previous practice. However, by adhering to pre-bidding terms additional payment of ₹28 Lacs could have been avoided.
- Specification of security deposit amounting to ₹3 Lacs as per pre-bidding signed off contract note was not replicated in the agreement signed with the transporters. Approval for the deviation was also not obtained from COO.
- We are given to understand that past practices were followed to run the business. Moreover, the pre-auction documents submitted by 'Metaljunction' were not reviewed properly before going into on-line auction and while signing off agreement with the transporters.

Recommendation

Pre-bidding documentation need to be verified properly and the same should form part of the agreement.

Action Plan

- With this reverse option we have reduced our Primary Freight by ₹ 31.4 Lacs during 22-23 and this will be a continuous feature.
- Contract was awarded to our existing transporters on the lowest rate received from L – 1. Our purpose of reverse auction was to get the correct market rates.
- As regard to pre bidding signed off contract clause of increase / decrease in HSD rates is more or equal to 10% (cumulative in a year) was amended to 2% while doing the agreement with our existing transporters on the basis of previous practice. (10 % variation will impact heavily on both the sides like transporters bearing the increase and company is not able to get the benefit of reduction in diesel prices). However, we agree to verify and modify pre-bidding document in future.
- In the past such deposits were never taken and also there are some bills always pending with us for payment to be made to transporters.
- However, we agree to verify and modify pre-bidding document in future.

</td><td>

Operation/ Financial Risk

Additional freight paid - ₹ 28 Lacs

</td></tr>
</table>

Observation / Recommendation / Action Plan	Impact/ Concern
5. Authorisation for change of destination and rate in master data not configured **Observation** Distance for various destinations is not approved by the appropriate authority for freight billing purposes, since all the users in supply chain department have been assigned to change the master data in relation to road mileage and freight. **Recommendation** Distance chart for various regular routes need to be made available and loaded in SAP Master. Any deviation needs to be approved by authorised person. **Action Plan** All users are able to do this, as there is only one ID. Under SAP reimplementation, the entire authorisation for putting the master record will be only with one person.	**Operation/ Financial Risk** Possibility of unauthorised payment to transporter

Topic

Module 1: Specific Accounting Standards and

Module 3: Accounting of Financial Instruments

FINAL

Group IV - Paper-18

Corporate Financial Reporting (CFR)

Topic: Specific Accounting Standards

Problem 1

An enterprise operates through eight segments, namely, A, B, C, D, E, F, G and H. The relevant information about these segments is given in the following table (amounts in ₹'000):

	A	B	C	D	E	F	G	H	Total (segment)
1. Segment Revenue									
(a) External Sales	-	255	15	10	15	50	20	35	400
(b) Inter Segment Sales	100	60	30	5	-	-	5	-	200
2. Segment Results [Profit/ (Loss)]	5	(90)	15	(5)	8	(5)	5	7	
3. Segment Assets	15	47	5	11	3	5	5	9	100

Identify the reportable segments as per AS17

Solution:

Calculation for identification of reportable segments

The reportable segments are identified as follows –

Particulars	A	B	C	D	E	F	G	H	Total
1.**Segment Revenue**									
(a) External Sales	-	255	15	10	15	50	20	35	400
(b) Inter Segment Sales	100	60	30	5	-	-	5	-	200
Total Revenue	100	315	45	15	15	50	25	35	600
% of segment revenue to the total revenue of all segments taken together	**16.7**	**52.5**	7.5	2.5	2.5	8.3	4.17	5.83	100
2. **Segment Results**									
Profit	5		15		8		5	7	40
(Loss)		-90		-5		-5			-100
% of segment profit/loss to the higher of total profit or total loss in absolute figure	5	**90**	**15**	5	8	5	5	7	
3. **Segment Assets**	15	47	5	11	3	5	5	9	100
% of segment assets to the total assets of all segments taken together	**15**	**47**	5	**11**	3	5	5	9	100

1. As per the Segment Revenue criterion Segments A and B.

2. As per the Segment Result criterion Segments B and C.

3. As per the Segment Asset criterion Segments A, B and D.

Further, we assume that the management has not identified any other segments voluntarily at their discretion for reporting purpose.

So primarily the reportable segments are A, B, C and D.

Now total external sales of the above four segments = Nil +255+15+10 = 280

However, the threshold external sales = 75% of total external sales = 75% of 400 = 300.

Thus in order to achieve the threshold one or more segments are to be identified as reportable. Let us consider segment F with highest external sales for this purpose.

So finally the reportable segments are – A, B, C, D, F and all other segments are to be reported on a consolidated basis under the head 'Other Segments'.

Topic: Accounting of Financial Instruments

- **Compound Financial Instruments**
- **Concept of Compound Financial Instruments**

A compound instrument is defined as an instrument having characteristics of both equity as well as debt instrument. A common form of compound financial instrument is a debt instrument with an embedded conversion option, such as a bond convertible into ordinary shares of the issuer, and without any other embedded derivative features.

- **Accounting for Compound Financial Instruments**

In the context of accounting for compound financial instruments, Para 28 of Ind AS 32, *Financial Instruments: Presentation*, requires the issuer of such a financial instrument to present the liability component and the equity component separately in the balance sheet, as follows:

i. The issuer's obligation to make scheduled payments of interest and principal is a financial liability that exists as long as the instrument is not converted.

ii. The equity instrument is an embedded option to convert the liability into equity of the issuer.

Accordingly, the accounting for compound financial instruments must adhere to the following provisions:

(a) On initial recognition, the fair value of the liability component is the present value of the contractually determined stream of future cash flows discounted at the rate of interest applied at that time by the market to instruments of comparable credit status and providing substantially the same cash flows, on the same terms, but without the conversion option.

(b) Subsequently, the debt components should be accounted for using effective interest rate method similar to a financial liability.

(c) On conversion of a convertible instrument at maturity, the entity derecognises the liability component and recognises it as equity. The original equity component remains as equity (although it may be transferred from one line item within equity to another). There is no gain or loss on conversion at maturity.

Consider the following illustrations.

Problem 1

X Ltd, issued 40,000 8% convertible debentures @ ₹100 each on 1st April, 2023. The debentures are due for redemption on 31st March, 2027 at a premium of 20%, convertible into equity shares to the extent of 50% and balance to be settled in cash to the debenture holders. The interest rate on equivalent debenture without conversion right was 12%. The conversion to equity qualifies as fixed for fixed. You are required to separate the debt and equity components at the time of issue and show the accounting entries in the books of X Ltd. at initial recognition only. The following present values of Rupee 1 at 8% and 12% are provided for a period of 5 years.

Interest rate	Year 1	Year 2	Year 3	Year 4	Year 5
8%	0.923	0.853	0.789	0.731	0.677
12%	0.887	0.788	0.701	0.625	0.557

Solution:

Computation of Debt and Equity component

Particulars	Workings		Amount (₹)
Initial Proceeds	40,000 x 100		40,00,000
Less:			
Liability Component: Interest (40,000 x 100 x 8%)	3,20,000 x 3.001 [PVIFA i.e. @ 12% for 1-4 years]	(9,60,320)	
Principal (40,000 x 100 x 50% x 120%)	24,00,000 x 0.625 [PVIF @ 12% for 4th Year end]	(15,00,000)	
			(24,60,320)
Equity Component	Balancing figure		15,39,680

The journal entry on initial recognition will be as follows:

In the books of X Ltd.

Journal

		Dr.	Cr.
Date	Particulars	Amount (₹)	Amount (₹)
01.04.2023	Bank A/c…………………………………. Dr.	40,00,000	
	To 8% Convertible Debentures – Debt Component A/c		24,60,320
	To 8% Convertible Debentures – Equity Component A/c		15,39,680

Problem 2

Y Ltd, issued 7,50,000, 4.5% convertible bonds having a face value of ₹20 each at par on 1st April, 2019. The bonds have a life of 5 years and can be converted into one ordinary share of Y Ltd. (face value ₹10 each) at any time in next five years. The interest rate on equivalent bonds without conversion option was 6%. You are required to:

(i) Provide the appropriate accounting entries on initial recognition.

(ii) Calculate the stream of interest expenses across the five years of the life of the bond.

(iii) Provide the accounting entries for the four years if the holders of the bons elect to convert the bonds to ordinary shares at the end of fourth year.

Solution:

(i) Computation of Debt and Equity component

Particulars	Workings		Amount (₹)
Initial Proceeds	7,50,000 x 20		1,50,00,000
Less:			
Liability Component: Interest (1,50,00,000 x 4.5%)	6,75,000 x 4,212 [PVIFA i.e. @ 6% for 1-5 years]	(28,43,100)	
Principal	1,50,00,000 x 0.747 [PVIF @ 12% for 4th Year end]	(1,12,05,000)	
			(1,40,48,100)
Equity Component	Balancing figure		9,51,900

The journal entry on initial recognition will be as follows:

In the books of Y Ltd.

Journal

		Dr.	Cr.
Date	Particulars	Amount (₹)	Amount (₹)
01.04.2019	Bank A/c…………………………………. Dr.	1,50,00,000	
	To Convertible Bonds – Debt Component A/c		1,40,48,100
	To Convertible Bonds – Equity Component A/c		9,51,900

(ii) Stream of Interest Expense (Effective Interest Rate Method)

Date	Payment (₹)	Interest expense @ 6% (₹)	Increase in bond liability (₹)	Carrying Amount of Bond (₹)
01.04.2019				1,40,48,100
31.03.2020	6,75,000	8,42,886	1,67,886	1,42,15,986
31.03.2021	6,75,000	8,52,959	1,77,959	1,43,93,945
31.03.2022	6,75,000	8,63,637	1,88,637	1,45,82,582
31.03.2023	6,75,000	8,74,955	1,99,955	1,47,82,537
31.03.2024	6,75,000	8,92,463	2,17,463	1,50,00,000

If the holders elect to convert the bonds at the end of fourth year (31.03.2023), the entries up to fourth year will be as follows:

In the books of Y Ltd.

Journal

		Dr.	Cr.
Date	Particulars	Amount (₹)	Amount (₹)
31.03.2020	Interest Expense A/c………………………… Dr.	8,42,886	
	To Bank A/c		6,75,000
	To Convertible Bonds – Debt Component A/c		1,67,886
31.03.2021	Interest Expense A/c………………………… Dr.	8,52,959	
	To Bank A/c		6,75,000
	To Convertible Bonds – Debt Component A/c		1,77,959
31.03.2022	Interest Expense A/c………………………… Dr.	8,63,637	
	To Bank A/c		6,75,000
	To Convertible Bonds – Debt Component A/c		1,88,637
31.03.2023	Interest Expense A/c………………………… Dr.	8,74,955	
	To Bank A/c		6,75,000
	To Convertible Bonds – Debt Component A/c		1,99,955
31.03.2023	Convertible Bonds – Debt Component A/c…. Dr.	1,47,82,537	
	Convertible Bonds – Equity Component A/c…. Dr.	9,51,900	
	To Equity Share Capital A/c (750000 x 10)		75,00,000
	To Securities Premium A/c		82,34,437

Topic

Module 4: Valuation (Advanced)

FINAL

Group IV - Paper-19

Indirect Tax Laws and Practice (ITLP)

Value of Supply

The Goods and Services Tax (GST) is a comprehensive indirect tax reform in India that replaced a plethora of central and state taxes with a single unified tax. Under the GST regime, the "value of supply" is a fundamental concept that determines the tax liability of businesses. It represents the price at which goods or services are transacted and serves as the basis for calculating GST. This note delves into the intricacies of the value of supply under GST, covering its definition, key considerations, special cases, and significance in the tax landscape.

Value of Supply

The value of supply is defined under Section 15 of the Central Goods and Services Tax Act, 2017 (CGST Act) as the price actually paid or payable for the supply of goods or services when the supplier and recipient are not related. It includes all taxes, duties, cesses, fees, and charges levied under any law (other than GST itself) that are charged separately by the supplier. Additionally, expenses incurred by the supplier on behalf of the recipient, such as freight and insurance, are also included if they are part of the transaction price.

Inclusions in the Value of Supply

The following elements need to be included in the value of supply:

- **Price** paid by the recipient (excluding GST)
- **Taxes, duties, cesses, fees, and charges** (excluding GST) paid by the supplier which are incidental to the supply
- Any amount that the supplier is liable to pay but has been charged to the recipient (e.g., freight, insurance)
- **Incidental expenses**, such as commission and packing, charged by the supplier to the recipient if they form part of the price of supply
- **Interest, late fees, or penalty** for delayed payment
- **Subsidies** linked to the supply, except for subsidies provided by the Central and State governments

Exclusions from the Value of Supply

Certain components are excluded from the value of supply:

- **Discounts** given before or at the time of supply, if such discounts are recorded in the invoice
- **Post-supply discounts** provided they are established in the agreement and can be linked to relevant invoices

Key Considerations in Determining the Value of Supply

Several factors are crucial in determining the value of supply under GST:

1. **Transaction Value**: The transaction value is the most common method of determining the value of supply. It is the price agreed upon between the supplier and the recipient in an arm's-length transaction. However, certain conditions must be met for the transaction value to be considered the value of supply:
    - The buyer and seller must not be related parties.
    - The price must be the sole consideration for the supply.
    - The payment must be made or payable in cash or kind.
2. **Related Party Transactions**: If the supplier and recipient are related parties, the transaction value may not reflect the true value of the supply. In such cases, the tax authorities may apply special valuation rules to determine the arm's-length price. These rules may involve comparing the transaction price with prices in similar transactions between unrelated parties.
3. **Barter Transactions**: When payment is made in kind, the value of supply is determined based on the open market value of the goods or services received. This ensures that the tax liability is based on the true value of the transaction.

4. **Supplies to Government**: Specific rules apply to determine the value of supply in transactions with government entities. These rules may involve considering factors such as the nature of the supply, the terms of the contract, and the prevailing market prices.

5. **Exclusions from Value of Supply**: Certain items are specifically excluded from the value of supply. These include:
   - The GST amount itself
   - Genuine discounts offered and recorded in the invoice
   - Subsidies received from the government
   - Taxes and duties that are not charged separately by the supplier

Special Cases in Value Determination

In certain specific scenarios, the determination of the value of supply requires careful consideration and may involve applying specific valuation rules. These cases include:

1. **Composite Supplies**: Composite supplies involve a combination of goods and services that are inextricably linked. The value of supply for composite supplies is determined based on the principal supply, which is the primary object of the transaction.

2. **Mixed Supplies**: Mixed supplies involve a combination of goods and services that are not inextricably linked. The value of supply for mixed supplies is determined based on the predominant supply, which is the supply that contributes the most to the overall value of the transaction.

3. **Leases and Rentals**: The value of supply for leases and rentals is determined based on the consideration received for the use of the property. This may include factors such as the duration of the lease, the location of the property, and the prevailing market rates.

4. **Works Contracts**: Works contracts involve the supply of both goods and services. The value of supply for works contracts is determined based on the total consideration received for the contract, including the cost of materials and labour.

Significance of Value of Supply in GST

The value of supply plays a pivotal role in the GST regime for several reasons:

1. **Tax Calculation**: The value of supply is the base on which GST is calculated. The tax liability is determined by multiplying the value of supply by the applicable GST rate.

2. **Input Tax Credit (ITC)**: The ITC is a mechanism that allows businesses to set off the GST paid on inputs against the GST payable on outputs. The ITC available to businesses is linked to the value of supply of inputs.

3. **Accurate Record-Keeping**: Businesses are required to maintain accurate records of the value of supply for various purposes, including tax compliance, reconciliation, and audits.

4. **GST Returns**: The value of supply is a critical element in the preparation and filing of GST returns. Businesses must report the value of supply of both taxable and exempt supplies in their returns.

Conclusion

The value of supply is a cornerstone of the GST regime in India. It determines the tax liability of businesses and influences various aspects of GST compliance. Businesses must have a clear understanding of the principles and rules governing the value of supply to ensure accurate tax calculations and avoid potential disputes with the tax authorities. By adhering to the provisions of the GST law and maintaining proper records, businesses can navigate the complexities of the value of supply and ensure smooth compliance with the GST regime.

Topic

Module 2:
Performance Measurement, Evaluation and Improvement Tools

Module 6:
Laws and Compliance in Business Valuation

ELECTIVES

Paper-20A

Strategic Performance Management and Business Valuation (SPMBV)

Module 1 : Performance Measurement, Evaluation and Improvement Tools

Performance improvement and measurement are essential for organisations seeking sustained success and competitive advantage. Effective tools in this domain allow organisations to track efficiency, enhance productivity, and align strategic objectives. This article examines key performance measurement and improvement tools, including Key Performance Indicators (KPIs), Balanced Scorecards (BSC), Six Sigma, Total Quality Management (TQM), and Performance Appraisals. It further presents a case study on Toyota's use of Lean and Six Sigma principles, highlighting practical applications and benefits. Through a structured analysis, this paper underscores the significance of selecting and integrating appropriate performance measurement tools to drive continuous improvement.

Introduction

The ability to measure and improve performance is a critical factor in any organisation's success. Performance improvement involves systematic approaches that enhance productivity, efficiency, and overall effectiveness. Meanwhile, performance measurement ensures that progress is tracked and evaluated using specific metrics. Various tools have been developed over time to facilitate these processes, enabling organisations to identify gaps, implement corrective measures, and align performance with strategic objectives.

This research article explores prominent tools for performance improvement and measurement, providing insights into their effectiveness. Additionally, a case study on Toyota's application of Lean and Six Sigma methodologies offers a practical perspective on how organisations leverage these tools to drive continuous improvement.

Performance Measurement Tools

Performance measurement tools provide quantifiable data that organisations use to assess efficiency and effectiveness. Some of the most commonly used tools include:

Key Performance Indicators (KPIs)

Key Performance Indicators (KPIs) are measurable values that indicate how effectively an individual, team, or organisation is achieving its objectives. KPIs are widely used across industries to monitor progress and ensure alignment with strategic goals. These indicators are typically classified into:

1. **Financial KPIs** – Examples include revenue growth, profit margins, and return on investment (ROI).
2. **Operational KPIs** – Metrics such as production efficiency, customer satisfaction rates, and on-time delivery.
3. **Employee Performance KPIs** – Examples include employee turnover rates, productivity levels, and engagement scores.

Well-defined KPIs are essential for guiding decision-making and fostering continuous improvement. However, organisations must ensure that their KPIs are specific, measurable, achievable, relevant, and time-bound (SMART).

Balanced Scorecard (BSC)

Developed by Kaplan and Norton in the early 1990s, the Balanced Scorecard (BSC) is a strategic management tool that enables organisations to measure performance beyond financial indicators. It incorporates four key perspectives:

1. **Financial Perspective** – Measures financial performance through profitability, revenue growth, and cost management.
2. **Customer Perspective** – Assesses customer satisfaction, retention, and brand loyalty.
3. **Internal Processes Perspective** – Evaluates efficiency in operational processes, innovation, and quality control.
4. **Learning and Growth Perspective** – Focuses on employee development, skill enhancement, and innovation.

The Balanced Scorecard ensures a comprehensive approach to performance measurement, promoting a balance between financial and non-financial metrics.

Benchmarking

Benchmarking involves comparing an organisation's performance metrics against industry best practices or competitors. This process helps identify areas for improvement and fosters the adoption of superior strategies. There are several types of benchmarking:

1. **Internal Benchmarking** – Comparing performance across different departments within the same organisation.
2. **Competitive Benchmarking** – Assessing performance against direct competitors.
3. **Functional Benchmarking** – Comparing processes with leading organisations outside the industry.
4. **Strategic Benchmarking** – Evaluating long-term strategies to enhance competitive positioning.

Benchmarking allows organisations to adopt best practices, drive innovation, and maintain a competitive edge.

Performance Improvement Tools

While performance measurement identifies gaps, performance improvement tools enable organisations to address inefficiencies and enhance productivity. Below are some of the most effective tools for performance improvement.

Six Sigma

Six Sigma is a data-driven methodology aimed at reducing defects and improving quality. It is based on two primary models:

1. **DMAIC (Define, Measure, Analyse, Improve, Control)** – Used for improving existing processes.
2. **DMADV (Define, Measure, Analyse, Design, Verify)** – Applied in designing new processes or products.

By employing statistical analysis, Six Sigma helps organisations eliminate errors, reduce process variation, and enhance overall efficiency.

Lean Management

Lean Management is a philosophy focused on eliminating waste while maximising value. Developed from Toyota's production system, Lean principles revolve around:

1. **Identifying Value** – Understanding what the customer values the most.
2. **Mapping the Value Stream** – Analysing processes to eliminate non-value-adding activities.
3. **Creating Flow** – Ensuring smooth workflow with minimal interruptions.
4. **Establishing Pull Systems** – Producing goods based on customer demand rather than forecasts.
5. **Striving for Perfection** – Continuously improving processes to enhance efficiency.

Lean principles are widely used across industries, from manufacturing to healthcare, to streamline operations and reduce costs.

Total Quality Management (TQM)

Total Quality Management (TQM) is a holistic approach to performance improvement, focusing on long-term success through customer satisfaction. TQM principles include:

1. **Customer-Centric Approach** – Meeting or exceeding customer expectations.
2. **Employee Involvement** – Encouraging a culture of quality ownership among employees.
3. **Process-Centric Approach** – Continuous monitoring and improvement of processes.
4. **Data-Driven Decision-Making** – Using performance data to make informed decisions.

TQM fosters a culture of continuous improvement, ensuring quality at every stage of an organisation's operations.

Performance Appraisals

Performance appraisals are structured evaluations of employee performance based on predefined criteria. Common appraisal methods include:

1. **360-Degree Feedback** – Collecting feedback from supervisors, peers, and subordinates.
2. **Management by Objectives (MBO)** – Setting specific, measurable goals for employees.

3. **Behaviourally Anchored Rating Scales (BARS)** – Assessing performance based on behavioural criteria.

Effective performance appraisals help organisations identify talent, address skill gaps, and enhance overall workforce productivity.

Case Study: Toyota's Use of Lean and Six Sigma for Performance Improvement

Background

Toyota Motor Corporation is a leading global automobile manufacturer known for its commitment to quality and efficiency. Over the years, Toyota has implemented Lean and Six Sigma methodologies to improve operational performance, reduce waste, and enhance customer satisfaction.

Implementation of Lean and Six Sigma

1. **Elimination of Waste (Muda)** – Toyota identified seven types of waste in its production process, including overproduction, waiting time, transportation, over-processing, inventory, motion, and defects. By reducing these inefficiencies, Toyota improved productivity and cost-effectiveness.
2. **Just-in-Time (JIT) Production** – Toyota adopted JIT to minimise inventory levels and produce only what is needed based on customer demand. This reduced storage costs and increased efficiency.
3. **Kaizen (Continuous Improvement)** – Toyota fostered a culture of continuous improvement where employees at all levels contributed ideas to enhance processes.
4. **Six Sigma for Defect Reduction** – Toyota implemented Six Sigma tools to reduce manufacturing defects, ensuring high-quality standards and minimal rework costs.

Results

The integration of Lean and Six Sigma enabled Toyota to achieve remarkable improvements:

- Reduction in production costs by eliminating unnecessary processes.
- Significant improvements in quality, reducing defect rates.
- Enhanced employee involvement, leading to a culture of continuous improvement.
- Increased customer satisfaction due to high-quality vehicles.

Module 6: Laws and Compliance in Business Valuation

Business valuation is a critical process that determines the economic worth of an enterprise for various purposes, including mergers, acquisitions, taxation, and legal disputes. Several laws and regulations govern business valuation to ensure transparency, accuracy, and compliance with legal and financial standards. This article explores key laws related to business valuation, including international accounting standards, tax regulations, and legal frameworks governing mergers and acquisitions. Additionally, a case study on a landmark legal dispute involving business valuation illustrates the practical implications of these laws.

Business valuation plays a fundamental role in corporate transactions, financial reporting, and legal proceedings. The process involves assessing the value of a business based on factors such as financial performance, market conditions, and future growth potential. Given its significance, business valuation is subject to various laws and regulations designed to ensure consistency, fairness, and legal compliance.

This research article examines the primary laws related to business valuation, including accounting standards, tax laws, corporate governance regulations, and legal precedents. A case study on the valuation dispute in the Dell Inc. buyout highlights the practical applications of these laws in a real-world scenario.

Key Laws Governing Business Valuation

1. Accounting and Financial Reporting Standards

Accounting and financial reporting standards provide guidelines for business valuation to ensure transparency and consistency in financial statements. Key regulatory frameworks include:

1.1 International Financial Reporting Standards (IFRS)

The International Financial Reporting Standards (IFRS) provide globally accepted principles for financial reporting, including valuation requirements. IFRS 13 ("Fair Value Measurement") sets out the framework

for determining the fair value of assets and liabilities, ensuring consistency across industries.

IFRS 13 defines fair value as the price at which an asset or liability could be exchanged between knowledgeable, willing parties in an arm's-length transaction.

It establishes a hierarchy for fair value measurement, categorising inputs into Level 1 (market prices), Level 2 (comparable transactions), and Level 3 (estimates and models).

1.2 Generally Accepted Accounting Principles (GAAP)

The Generally Accepted Accounting Principles (GAAP) in the United States provide similar guidelines for business valuation, particularly through:

ASC 820 (Fair Value Measurement) – Aligns with IFRS 13 in defining fair value and establishing measurement standards.

ASC 350 (Goodwill and Intangible Assets) – Governs impairment testing for goodwill and intangible assets in business valuation.

Accounting standards ensure that businesses report their valuation consistently, reducing the risk of financial misrepresentation.

2. Tax Laws and Business Valuation

Tax laws significantly impact business valuation, particularly in areas such as inheritance tax, corporate tax, and capital gains tax. Key tax-related valuation regulations include:

2.1 Internal Revenue Code (IRC) – U.S. Tax Law

The Internal Revenue Code (IRC) governs taxation in the United States and establishes specific requirements for business valuation in tax matters:

Section 482 – Regulates transfer pricing for multinational corporations to prevent profit shifting and ensure fair market value in intercompany transactions.

Section 409A – Governs the valuation of stock options and deferred compensation to prevent tax avoidance.

Estate and Gift Tax Regulations – Require fair market valuation of businesses for inheritance and gifting purposes, ensuring accurate tax assessments.

2.2 UK Tax Regulations – HM Revenue & Customs (HMRC)

In the United Kingdom, HM Revenue & Customs (HMRC) oversees tax-related business valuation. Notable regulations include:

Inheritance Tax Act 1984 – Requires the valuation of businesses for estate tax calculations.

Corporation Tax Act 2009 – Specifies valuation principles for corporate taxation and asset depreciation.

Market Value Rule – Ensures that transactions between related parties occur at fair market value to prevent tax evasion.

Tax laws are crucial in ensuring that business valuations accurately reflect taxable value, preventing underreporting and tax avoidance.

3. Laws Governing Mergers, Acquisitions, and Corporate Transactions

Mergers and acquisitions (M&A) often involve complex valuation issues, necessitating regulatory oversight to protect stakeholders. Key legal frameworks include:

3.1 U.S. Securities and Exchange Commission (SEC) Regulations

The Securities and Exchange Commission (SEC) enforces laws governing M&A transactions, ensuring fair valuation and investor protection. Relevant regulations include:

Securities Act of 1933 – Requires accurate financial disclosures, including valuation reports, in public offerings and M&A transactions.

Securities Exchange Act of 1934 – Mandates transparency in financial reporting and prevents fraudulent valuation practices.

Rule 13e-3 – Governs fairness in going-private transactions, requiring an independent valuation of shares.

3.2 UK Takeover Code (The City Code on Takeovers and Mergers)

In the UK, the Takeover Code regulates public company acquisitions to ensure fair treatment of shareholders. Key provisions include:

Rule 3 – Requires independent financial advisers to provide a fair valuation of target companies.

Rule 9 – Ensures fair pricing in mandatory takeover offers.

Rule 11 – Mandates that all shareholders receive equivalent value during a takeover.

These laws protect minority shareholders and prevent manipulative valuation practices in corporate transactions.

4. Legal Precedents and Judicial Interpretation of Business Valuation

Judicial rulings play a significant role in shaping business valuation practices, particularly in legal disputes involving shareholder rights, buyouts, and financial misrepresentation.

4.1 Delaware Court of Chancery Precedents

The Delaware Court of Chancery is a leading authority in corporate law, frequently ruling on business valuation disputes. Notable cases include:

Weinberger v. UOP, Inc. (1983) – Established the "entire fairness" standard for M&A valuation, requiring independent valuation assessments.

Dell Inc. Appraisal Case (2016) – A landmark decision where the court ruled that the management buyout price undervalued the company, leading to a revised valuation for shareholders.

4.2 UK Judicial Decisions on Business Valuation

In the UK, courts have ruled on valuation disputes in cases involving shareholder oppression, insolvency, and divorce settlements. Key cases include:

Re Blue Arrow plc (1987) – Emphasised the role of independent valuation in hostile takeovers.

Prest v. Petrodel Resources Ltd (2013) – Addressed business valuation in divorce proceedings, setting a precedent for asset division.

Legal precedents ensure that business valuations are conducted with fairness, transparency, and legal integrity.

Case Study: Dell Inc. Appraisal Litigation (2016)

Background

In 2013, Dell Inc. underwent a management buyout (MBO) led by founder Michael Dell and private equity firm Silver Lake Partners. Shareholders challenged the buyout price, arguing that it undervalued the company.

Legal Issues

Shareholders claimed the $13.75 per share buyout price was significantly lower than the fair market value.

The Delaware Court of Chancery conducted an appraisal under Delaware General Corporation Law (DGCL) Section 262, which allows dissenting shareholders to seek a fair valuation.

Court Ruling

The court determined that the actual fair value of Dell Inc. was $17.62 per share, 28% higher than the buyout price.

The ruling criticised reliance on market prices alone, emphasising the need for rigorous valuation methodologies.

Lessons Learned

Business valuations must consider multiple factors beyond stock prices, including cash flow analysis and market conditions.

Legal scrutiny ensures that corporate buyouts are conducted fairly, protecting shareholder interests.

Laws related to business valuation are essential in ensuring transparency, fairness, and compliance with financial and corporate regulations. Accounting standards, tax laws, M&A regulations, and legal precedents collectively shape business valuation practices. The Dell Inc. case highlights the importance of legal oversight in valuation disputes, reinforcing the need for robust methodologies and independent assessments. As business transactions grow in complexity, adherence to legal frameworks remains critical in ensuring accurate and equitable valuation outcomes.

Topic

Module 2: Interest Rate Risk and Market Risk

Module 6: Introduction to Insurance Business

ELECTIVES

Paper-20B

Risk Management In Banking and Insurance (RMBI)

Interest Risk and Market Risk in Banking Sector

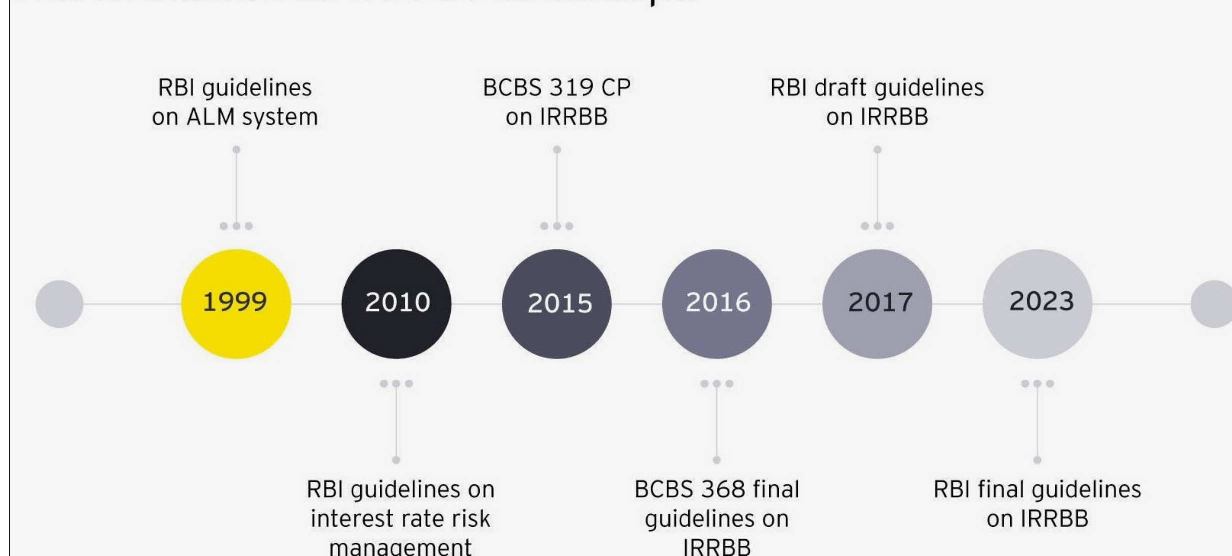
Interest Risk:

The Reserve Bank of India (RBI) on 17 February 2023 issued the final guidelines on Interest Rate Risk in the Banking Book (IRRBB). The enhanced guidelines require banks to measure, monitor and disclose their exposure to IRRBB based on a set of prescribed interest rate shock scenarios and assumptions on the underlying balance sheet that may impact the capital base and future earnings of banks.

One of the most important aspects which the regulator has emphasized is for banks to model the behaviour of assets and liabilities for cashflow profiling by considering the impact of macro-economic variables.

In India, deposits are the significant portion of the liability portfolio. In light of the global events (the collapse of SVB) and the rapid rise in interest rates, it is imperative for banks to evaluate the behaviour of such products in relation to macro-economic factors. Non-maturing deposits are typically sensitive to macro-economic factors. Therefore, every Indian bank needs to evaluate this sensitivity for their own portfolio and start this process by developing a macro-sensitive behavioural model for deposit segments.

On the other hand, the majority of loans (asset side) in India are of floating nature, resulting in lower prepayment risk. Hence, the macro-sensitivity on the assets side will be much lower, and building macro-sensitive models is not expected to yield significant outcomes. However, banks need to do analysis to evidence the macro-sensitivity is not high for their loan portfolio.



Banks should approach the latest guidance with the intent of developing a robust and strategic framework for balance sheet management over a long term. Accordingly, they may consider the following:

Book separation: Banks must undertake a clinical process to capture only their banking book exposures for IRRBB measurement and management. The boundaries between the banking and trading books, the extent, and restrictions on moving instruments across regulatory books are provided in the draft guidelines. While banks are expected to follow the existing guidelines for book segregation as of now, they would need to revisit this classification in light of the new guidelines again in the future. The delineation between banking book and trading book should be clear.

Data granularity: Banks will need to evaluate their existing data management and governance framework to ensure they are able to provision and store appropriately granular historical data including contractual maturity, associated optionality, early maturity dates, other

attributes as required for behavioural modelling etc., while also meeting expected data quality requirements.

NII stabilization: IRRBB can be used to achieve Bank's Board of Directors (BoD) targeted Net Interest Income (NII) stabilization. This should be mapped according to an optimal level of NII required to achieve an expected interest rate outlook over the next one to two years. Furthermore, residual interest rate risk can be hedged by using interest rate swaps (IRS) or other derivative instruments.

Measurement approach: Banks may adopt standardized approach (SA) in accordance with the directive from RBI. The SA technique is expected to assist banks with benchmarking their internal models. Basel standard and revised RBI guidelines expect IRRBB to be measured across three risk types i.e., gap, basis, and options. Banks would need to attribute and identify how each risk type is contributing to a bank's interest rate risk.

Model validation: Banks should ensure that any existing IRRBB models are identified and validated in line with the firm's risk management policy. New model requirements or their enhancements should be inventoried and mitigating actions, until such models are in production, should be identified and implemented. Their integration with bank's IRRBB framework is expected to capture deposit repricing and early redemption, prepayment of assets and other optionality. This will need stronger scrutiny and validation support on an ongoing basis.

Market Risk:

Market risk in the banking sector is the possibility of financial loss due to adverse changes in market prices. These changes can affect a bank's capital, earnings, and revenue.

Factors that contribute to market risk:

- ✓ Interest rates: Changes in interest rates can affect a bank's earnings and capital.
- ✓ Foreign exchange rates: Changes in exchange rates can lead to losses.
- ✓ Commodity prices: Changes in commodity prices can lead to losses.
- ✓ Equity prices: Changes in equity prices can lead to losses.
- ✓ Geopolitical events: Geopolitical events can cause market risk.
- ✓ Recessions: Recessions can cause market risk.

How banks manage market risk

- ✓ Banks can use hedging derivatives to convert assets and liabilities into floating-rate instruments.
- ✓ Banks can use technical standards, guidelines, and reports to implement provisions related to market risk.
- ✓ Banks can use the market risk capital rule to establish regulatory capital requirements.

Types of market risk:

- ✓ Interest rate risk: The risk of losses due to changes in interest rates
- ✓ Foreign exchange risk: The risk of losses due to changes in exchange rates
- ✓ Counterparty credit risk: The risk of losses due to a counterparty defaulting
- ✓ Credit valuation adjustment (CVA) risk: The risk of losses due to changes in CVA values

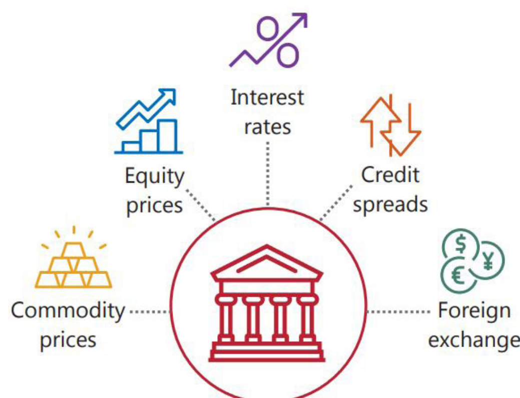
According to the Basel III framework, **market risk** is defined as the risk of losses arising from movements in market prices.

The market risk framework aims to ensure that banks maintain a minimum level of regulatory capital, to absorb losses arising from movements in market prices of instruments held in the trading book.

The risks subject to market risk capital requirements include but are not limited to:

(1) default risk, interest rate risk, credit spread risk, equity risk, foreign exchange (FX) risk and commodities risk for trading book instruments; and

(2) FX risk and commodities risk for banking book instruments.



All transactions, including forward sales and purchases, shall be included in the calculation of capital requirements as of the date on which they were entered into. Although regular reporting will in principle take place only at intervals (quarterly in most countries), banks are expected to manage their market risk in such a way that the capital requirements are being met on a continuous basis, including at the close of each business day.

Supervisory authorities have at their disposal a number of effective measures to ensure that banks do not window-dress by showing significantly lower market risk positions on reporting dates. Banks will also be expected to maintain strict risk management systems to ensure that intraday exposures are not excessive. If a bank fails to meet the capital requirements at any time, the national authority shall ensure that the bank takes immediate measures to rectify the situation.

A matched currency risk position will protect a bank against loss from movements in exchange rates, but will not necessarily protect its capital adequacy ratio. If a bank has its capital denominated in its domestic currency and has a portfolio of foreign currency assets and liabilities that is completely matched, its capital/ asset ratio will fall if the domestic currency depreciates. By running a short risk position in the domestic currency, the bank can protect its capital adequacy ratio, although the risk position would lead to a loss if the domestic currency were to appreciate.

Because the risk affects the entire market, it cannot be diversified in order to be mitigated but can be hedged for minimal exposure. Volatility, or the absolute/percentage dispersion in prices, is often considered a good measure for market risk. Professional analysts also tend to use methods like Value at Risk (VaR) modelling to identify potential losses via statistical risk management.

The VaR method is a standard method for the evaluation of market risk. VaR technique is a risk management method that involves the use of statistics that quantifies a stock or portfolio's prospective loss, as well as the probability of that loss occurring. Although it is widely utilized, the VaR method requires some assumptions that limit its accuracy.

To Conclude:

Interest rate risk and market risk are two types of risks that banks face. Interest rate risk is the risk that an investment's value will change due to interest rate fluctuations. Market risk is the risk that a bank's assets and liabilities will lose value due to changes in market variables.

Risk Management in Insurance (Introduction to Insurance Business)

Centuries ago, merchants were encouraged to take hazardous journeys by the existence of insurance: if they took the risk and disaster struck, then they would not be ruined if they were insured. The same social advantage is still there today. The exciting ventures have changed somewhat, but the ability to insure against various perils still enables individuals and companies to take on risks that they would not otherwise undertake.

Policyholders reduce uncertainty by passing risks to an insurance company. It is not surprising, therefore, that insurance companies themselves are subject to risk and uncertainty.

Most of the major uncertainties centre around how many claims there will be and how much the insurer will have to pay to settle them. These uncertainties have a big influence on how much the insurer will charge for the protection provided and how much the insurer needs to reserve for future claims payments. Other risks to the

insurer include: recovery of fixed expenses, failure of other parties (e.g. brokers or reinsurers), falls in asset values and the insurance cycle. The size of the free reserves will influence the ability of the insurer to cope up with these risks as will reinsurance cover and the investment policy.

India's Insurance Industry:

India's Insurance industry is one of the premium sectors experiencing upward growth. This upward growth of the insurance industry can be attributed to growing incomes and increasing awareness in the industry. India is the fifth largest life insurance market in the world's emerging insurance markets, growing at a rate of 32-34% each year. In recent years, the industry has been experiencing fierce competition among its peers which has led to new and innovative products within the industry.

Over the past nine years, the insurance sector has attracted substantial foreign direct investment amounting to nearly ₹. 54,000 crore (US$ 6.5 billion), driven by the government's progressive relaxation of overseas capital flow regulations.

The insurance industry of India has 57 insurance companies - 24 are in the life insurance business, while 34 are non-life insurers. Among the life insurers, Life Insurance Corporation (LIC) is the sole public sector company. There are six public sector insurers in the non-life insurance segment. In addition to these, there is a sole national re-insurer, namely General Insurance Corporation of India (GIC Re).

Other stakeholders in the Indian Insurance market include agents (individual and corporate), brokers, surveyors and third-party administrators servicing health insurance claims.

The insurance industry has undergone numerous transformations in terms of new developments, modified regulations, proposals for amendments and growth in 2022. These developments have opened new avenues of growth for the industry while ensuring that insurers stay relevant with changing times and the latest digital disruptions.

The Insurance Regulatory and Development Authority India (IRDA) is vigilant and progressive and is determined to achieve its mission of 'Insurance for all by 2047, with aggressive plans to address the industry's challenges.

The growth of the insurance market is being supported by important government initiatives, strong democratic factors, conducive regulatory environment, increased partnerships, product innovations, and vibrant distribution channels.

Insurance Industry was largely dominated by offline channels like corporate agents, offline brokers or banks. Today, rapid digitization, product innovation and progressive regulation policies have made it possible for consumers to buy insurance through multiple distribution channels with the click of a button. The instability of the covid-19 pandemic highlighted the necessity for consumers to invest in products that would increase financial security, one of them being life insurance.

The insurance industry in India has witnessed an impressive growth rate over the last two decades driven by the greater private sector participation and an improvement in distribution capabilities, along with substantial improvements in operational efficiencies.

According to S&P Global Market Intelligence data, India is the second-largest insurance technology market in Asia-Pacific, accounting for 35% of the US$ 3.66 billion Insurtech-focused venture investments made in the country.

The future looks promising for the life insurance industry with several changes in the regulatory framework which will lead to further changes in the way the industry conducts its business and engages with its customers. Going forward growing middle class, increasing awareness about the importance of insurance, and digital advancements, the sector is

expected to expand further increasing life expectancy, favourable savings and greater employment in the private sector is expected to fuel demand for pension plans. Life insurance industry in the country is expected to increase by 14-15% annually for the next three to five years. The scope of IoT in Indian insurance market continues to go beyond telematics and customer risk assessment. Currently, there are 110+ InsurTech start-ups operating in India.

These startups are expected to provide a major boost to the industry and help increase India's insurance penetration which plays a crucial role in the overall development of the country. In the past, the Indian government has played a crucial role in increasing the scope of the insurance sector through various policies and schemes. This trend will continue in the further through schemes like the Pradhan Mantri Fasal Bima Yojana (PMFBY) providing crop insurance and Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) providing life insurance coverage to the youth at an affordable price.

Schemes like these coupled with India's demographic factors such as a growing middle class, young insurable population, and growing awareness of the need for protection and retirement planning will support the growth of the Indian insurance sector.

To Conclude:

For over a decade, the insurance industry has grown increasingly sophisticated in its ability to understand and manage risk. Following a string of natural catastrophes from 1989 to 1994, insurers reinforced by the activities of modelers, rating agencies, reinsurers, and the capital markets, made it a priority to quantify their risk and manage their exposures to acceptable levels. More recently, industry leaders have begun to take a more holistic view of risk, capital, and return Data on extreme events are rare by definition, and the unprecedented level and breadth of loss is forcing in to the open the issues that have long been discussed largely only among specialists in the risk management community. What is a Probable Maximum Loss (PML)? What is the correlation between catastrophe claims and the value of assets needed to make the payments? To what extent is reinsurance recoverable in the aftermath of a super-CAT (Catastrophe)? And, is the industry adequately capitalized and prepared to support its risk accumulations?

Topic

Module 1: Entrepreneurial Skill Sets

ELECTIVES

Paper-20C

Entrepreneurship and Start Up (ENTS)

Paper 20C : Entrepreneurship and Startup
Entrepreneurial Skill Set

Startup Funding Options for Startups

A startup might require funding for one, a few, or all of the following purposes. It is important that an entrepreneur is clear about why they are raising funds. Founders should have a detailed financial and business plan before they approach investors.

Types of Startup Funding

1. **Equity Financing:** Equity financing involves selling a portion of a company's equity in return for capital. Sources are: Angel Investors Self-financing Family and Friends Venture Capitalists Crowd Funding Incubators/Accelerators
2. **Debt Financing:** Debt financing involves the borrowing of money and paying it back with interest. Sources are: Banks Non-Banking Financial Institutions Government Loan Schemes.
3. **Grants:** A grant is an award, usually financial, given by an entity to a company to facilitate a goal or incentivize performance. Sources are: Central Government State Governments Corporate Challenges Grant Programs of Private Entities.

Stages of Startups and Source of Funding

Pre-Seed Stage [Ideation]

1. **Bootstrapping/Self-financing**: Bootstrapping is a strategy for launching and growing a startup without outside funding. It involves using personal savings, existing resources, and reinvesting revenue to build the business.
2. **Friends and Family**: This is commonly source of funding for startups.
3. **Business Plan/Pitching Events**: Business plan pitching events and competitions can help entrepreneurs secure funding for their businesses. These events allow entrepreneurs to present their business ideas to investors, judges, and other stakeholders.

Seed Stage [Validation]

1. **Incubators**: Incubators can receive funding from various government schemes and programs. Incubators can use this funding to provide seed funds to startups, and to cover operational expenses. Example: Startup India Seed Fund Scheme, Technology Business Incubator (NIDHI-TBI), Incubation Scheme**.**
2. **Government Loan Schemes**: Various ministries and departments have introduced schemes to provide financial, infrastructural, and regulatory support to startups. The listed schemes cover sectors like technology, manufacturing, agriculture, healthcare, and more. Details are available in the website of Startup India (https://www.startupindia.gov.in/).
3. **Angel Investors:** Angel investors are individuals who provide financial support to startups at an early stage. They often provide support when most investors are not willing to back the startup**.** Example: Anupam Mittal, Founder of Shaadi.com and People Group, he has backed startups like Ola, CarTrade, and BlueStone**,** Kunal Shah Founder of Freecharge and CRED, he is also an advisor to multiple organizations.
4. **Crowdfunding:** Crowdfunding is an innovative way for startups to raise the funds they need to launch or grow their businesses. Crowdfunding allows startups to test the market's response to their product or service before full-scale production and launch.

Series A Stage [Early Traction]

1. **Venture Capital Funds**: Venture capital funds are investment vehicles that provide capital to startups and small businesses in exchange for equity. Venture capital (VC) funds are professionally managed investment funds that invest exclusively

in high-growth startups. Each VC fund has its investment thesis – preferred sectors, stage of the startup, and funding amount – which should align with your startup.

2. **Banks/Non-Banking Financial Companies (NBFCs):** Banks and NBFCs can provide financial assistance in the form of Working Capital Limit and Term Loans to startups.

3. **Venture Debt Funds:** Venture debt funds are a type of financing that provide capital to early-stage businesses and startups. They are offered by specialized banks and non-bank lenders. Venture debt can be used to fund working capital, acquisitions, and other capital expenses.

Series B, C, D and E [Scaling]

1. **Venture Capital Funds**: Series B funding is a round of equity financing for startups that have already launched their products and started making money. Series B investors can provide mentorship, industry connections, and strategic guidance. Venture capital funds provide cash to startups in exchange for equity

2. **Private Equity/Investment Firms:** Private equity is expanding into the startup ecosystem, offering funding, expertise, and strategic guidance to help businesses grow. Startups can benefit from private equity through long-term capital, industry connections, and operational improvements**.**

Exit Options

1. **Mergers & Acquisitions:** A "merger and acquisition (M&A)" for a startup refers to a strategy where a young company buys or combines with another business to rapidly expand its market reach, access new technology, talent, or customer segments. Mergers and acquisitions enable start-ups to grow rapidly, enter new markets and strengthen their competitive position. Facebook's acquisition of Instagram stands as a notable example of a successful merger and acquisition.

2. **Initial Public Offering (IPO):** An IPO can help a business to attract a wide, diverse pool of investors, in exchange for shares through the primary market. IPOs typically raise the most capital of any single investment round. This funding can be used to support a company's growth in a number of ways, including: Product development.

Steps to Startup Fund Raising

The entrepreneur must be willing to put in the effort and have the patience that a successful fund-raising round requires. The fund-raising process can be divided into the following steps:

1. Steps1: Assessing Need for Funding
2. Steps2: Assessing Investment Readiness
3. Steps3: Preparation of Pitchdeck
4. Steps 4: Investor Targeting
5. Steps 5: Due Diligence by Interested Investors
6. Steps 6: Term Sheet

The startup needs to assess why the funding is required, and the right amount to be raised. The startup should develop a milestone-based plan with clear timelines regarding what the startup wishes to do in the next 2, 4, and 10 years.

Case Scenario

Mr. Ramesh is the owner of a startup. He conducted field trials, and test the product on a few potential customers, onboard mentors and build a formal team to explore the different functions.

Mr. Ramesh's team members have identified several sources of funding alternatives at this stage and reported accordingly.

Mr. Biki is one of the team members has identified some organisations they offer a lot of value-added services such as office space, utilities, administrative assistance. Besides they can also make grant/debt/equity investments. Mr. Tamaman has identified collateral-free debt for new entrepreneurs and help them gain to access

low-cost capital. Mr. Bikan has some individuals who wants to invest their money to high potential startups in return for equity. Mr. Sumuddra also offered another suggestion to Mr. Ramesh that the firm can collect from many people.

Choose the correct option from the given alternatives based on the above scenario:

1. Identify in which stage Mr. Ramesh's startup now.

   (a) Pre-seed stage

   (b) Seed stage

   (c) Series A

   (d) Series B

   Answer (b)

2. Which type of source of fund identified by Mr. Biki?

   (a) Bootstrapping

   (b) Government loan scheme

   (c) Incubators

   (d) Angel investors

   Answer (c)

3. Which type of source of fund identified by Mr. Tamaman?

   (a) Government loan scheme

   (b) Private equity

   (c) Venture capital

   (d) Initial public offering

   Answer (a)

4. Which type of source of fund identified by Mr. Bikan?

   (a) Crowdfunding

   (b) Bootstrapping

   (c) Private equity

   (d) Angel investors

   Answer (d)

5. Which type of source of fund identified by Mr. Sumuddra?

   (a) Crowdfunding

   (b) Venture capital

   (c) Private equity

   (d) Selling of shares

   Answer (a)

Invitation to Contribute Articles for CMA Student E-Bulletin - Showcasing Your Expertise!

Dear CMA Student,

We are excited to extend an invitation to you to contribute an article for the **CMA Student E-Bulletin,** our esteemed monthly e-journal exclusively crafted for CMA students. This platform, managed by the Directorate of Studies at ICMAI, aims to provide a space for your insights, experiences and knowledge-sharing within the CMA community.

Submission Guidelines:

- **Article Length:** Please prepare articles ranging between 1200 to 1500 words.
- **Topic:** The articles can cover a wide spectrum of subjects, including but not limited to advancements in finance, industry insights, case studies, personal experiences and emerging trends in the field.
- **Originality:** We encourage you to share your unique perspectives and experiences. Ensure that your submission has not been published elsewhere.

Submission Deadline: We kindly request you to submit your article by **20th of the previous month of publication.** This will allow us ample time to review and prepare the upcoming issues of the CMA Student E-Bulletin.

Submission Process: Please send your article to ***studies.ebulletin@icmai.in*** with the subject line **"CMA Student E-Bulletin Submission - [Your Name, Registration No.]".** Include a brief author bio and a high-resolution photograph to be featured alongside your article.

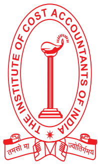
Recognition and Rewards: Selected articles will be featured prominently in the CMA Student E-Bulletin, providing you with a valuable platform to showcase your expertise. Additionally, authors of published articles will be acknowledged and the top contributors may be eligible for special recognition and rewards.

We believe that your unique insights and experiences will contribute significantly to the enrichment of the CMA Student E-Bulletin. Your participation will not only enhance your visibility within the CMA community but also foster a culture of knowledge-sharing and collaboration.

Best Regards,

Team DoS
The Institute of Cost Accountants of India

E-mail – studies.ebulletin@icmai.in

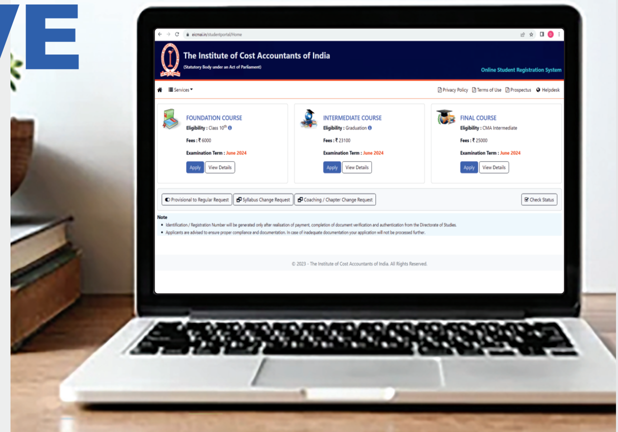


THE INSTITUTE OF
COST ACCOUNTANTS OF INDIA

Statutory Body under an Act of Parliament

www.icmai.in

NEW IT INITIATIVE TO PROVIDE ENHANCED FACILITIES TO CMA STUDENTS



A login feature has been integrated into the **ONLINE REGISTRATION APPLICATION SYSTEM** enabling students to access various services through their accounts.

To utilize this feature, students need to create a login account by verifying their email address through an OTP sent to their registered email ID. Once the email ID is verified, it becomes the user ID and students can set their password during the account creation process.

The introduced system enables students to:

- Register online for Foundation, Intermediate & Final Courses
- Check the status of their online applications
- Request Conversion from Old Syllabus to New Syllabus
- Request changes in Oral / Postal Coaching and opt for Chapter-to-Chapter Conversion
- Convert from Provisional to Regular status

Additional services for students will be seamlessly incorporated in the near future.

Behind every successful business decision, there is always a **CMA**

ICMAI
THE INSTITUTE OF COST ACCOUNTANTS OF INDIA
Statutory Body under an Act of Parliament
www.icmai.in

Since 1944

CMA Leads

- 4 Regional Councils
- 11 Overseas Centers
- 117 Chapters across India
- 61 CMA SC & 401 ROCC
- 1,00,000+ Alumni
- 5,00,000+ Students

Value Added Services for the CMA Students

- Study Materials
- Students E-Bulletin
- Knowledge Web Series
- E-Library
- Webinars
- Model Question Papers
- MCQ Portal
- Tutorial Workshops
- Coaching - Oral/Postal (E-learning)
- Skills Training
- Practical Training
- Industry Oriented Training Programme

Admission Deadlines

- For June Exam - 31st January of same Calendar Year
- For December Exam - 31st July of same Calendar Year

LARGEST CMA BODY IN THE WORLD

Under the administrative control of **Ministry of Corporate Affairs (MCA), Government of India**

CMA COURSE GOING GLOBAL

Mentoring Future-Ready Professionals

Eligibility

Admission in Foundation Course

- Passed Class 10 (Require to pass 10+2 before appearing in CMA Examination)
- 10+2 Pass or its equivalent (Students appearing for 10+2 also apply on provisional basis)

Registration to Intermediate Course

- Passed CMA Foundation Examination
- Graduates of any discipline (Students awaiting final result also apply on provisional basis)
- Qualified CAT Level - I of The Institute of Cost Accountants of India
- Qualified CA Intermediate
- Qualified Engineers

Course Fees

Foundation - ₹6,000/-	Intermediate - ₹23,100/-*	Final - ₹25,000/-*

*Installment facility available

To know more, Scan the QR Code

Skills Training Partner

NPTEL

Online Admission

https://eicmai.in/studentportal/Home

Prominent Recruiters in CMA Campus Placement Drives

And many more...

Headquarters
CMA Bhawan, 12, Sudder Street, Kolkata - 700016
033-40364777/40364722/40364726

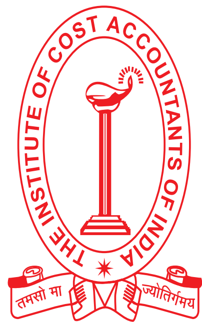
Delhi Office
CMA Bhawan, 3, Institutional Area, Lodhi Road
New Delhi - 110003
011-24622156/24622157/24622158

studies@icmai.in

Behind every successful business decision, there is always a CMA

placement@icmai.in

NOTES



ICMAI

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA

Statutory Body under an Act of Parliament

www.icmai.in

Headquarters
CMA Bhawan, 12, Sudder Street, Kolkata - 700016
Ph: 033-033-40364779/4721/4726/4777

Delhi Office
CMA Bhawan, 3, Institutional Area, Lodhi Road, New Delhi - 110003
Ph: 011-24622156/24622157/24622158/24666124

studies@icmai.in

Behind every successful business decision, there is always a CMA