Paper 9 – Operations Management and Strategic Management

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Full Marks: 100 **Time allowed: 3 hours**

The figures in the margin on the right side indicate full marks.
This question paper has two sections.
Both the sections are to be answered subject to instructions given against each.

Section – A (Operation Management)
PART – I

1. (a) Choose the correct Answer: (1x10=10)

(i) Number of product varieties that can be manufactured in Job production is:
- **(a) Limited to one or two,**
- **(b) Large varieties of products,**
- **(c) One only**
- **(d) None of the above.**

(ii) Generally, in continuous production the production is carried out to:
- **(a) Customer's order,**
- **(b) Government orders only,**
- **(c) For stock and supply,**
- **(d) Few rich customers.**

(iii) The starting point of Production cycle is:
- **(a) Product design,**
- **(b) Production Planning,**
- **(c) Routing,**
- **(d) Market research.**

(iv) Effective capacity can NOT be determined by which of the following factors?
- **(a) Product design and product-mix**
- **(b) Quantity and quality capabilities**
- **(c) Facilities**
- **(d) None of the above**

(v) Which one of the following standards is associated with the "Quality Assurance in Final Inspection "Test"?
- **(a) ISO 9001**
- **(b) ISO 9002**
- **(c) ISO 9003**
- **(d) ISO 9004**

(vi) To determine where the plant should be located for maximum operating economy and effectiveness, refers to which one of the following?
- **(a) Plant layout**
- **(b) Facility location**
- **(c) Capacity planning**
- **(d) Capacity requirement**

(vii) In which of the following stages the management should try to change its approach by changing its strategy from "buy my product" to "try my product"?

(a) Introduction

(b) Growth

(c) Maturity

(d) Decline

(viii) One of the important charts used in Programme control is

(a) Gantt chart

(b) Material chart

(c) Distribution chart

(d) Maintenance chart

(ix) For a marketing manager, the sales forecast is:

(a) Estimate of the amount of unit sales or a specified future period,

(b) Arranging the sales men to different segments of the market

(c) To distribute the goods through transport to satisfy the market demand,

(d) To plan the sales methods

(x) With reference to the characteristics of a good product design, which one of the following is referred to "the ease of manufacture with minimum cost"?

(a) Reliability

(b) Productibility

(c) Specification

(d) Simplification

(b) Match Column "A" with column "B" (6×1=6)

A	B
a. Furniture	(i) spinning mill
b. brainstorming	(ii) smithy
c. cotton yarn	(iii) crashing
d. computer aided design	(iv)value analysis
e. network analysis	(v)carpentry
f. forgings	(vi)product design

(c) State whether the following statements" true" or "false" (6×1=6)

(i) Customer service is a key objective of operations management

(ii) A work stoppage generally reduces the cost of production

(iii) Increased productivity leads to cost reduction.

(iv) One of the limitations of Gantt Chart is that it does not clearly indicate the details regarding progress of activities.

(v) Breakdown maintenance doesn't require use of standby machines.

(vi) Load control is typically found wherever a particular bottleneck machine does not exist in the process of manufacturing.

Answer:

1. (a)

(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
(b)	(c)	(d)	(d)	(c)	(c)	(b)	(b)	(a)	(b)

(b)

A	B
a. Furniture	(v) Carpentry
b. brainstorming	(iv) value analysis
c. cotton yarn	(i) spinning mill
d. computer aided design	(vi) product design
e. network analysis	(iii) crashing
f. forgings	(ii) smithy

(c)

(i)	True
(ii)	False
(iii)	True
(iv)	True
(v)	False
(vi)	True

PART – II

2. (a) (i) Define operation system briefly with some example. 3

(ii) Discuss recent trends in production management and its impact to global competition? 4

(b) (i) What is demand forecasting? What are the methods of forecasting? 3

(ii) An investigation into the use of Bus in 5 towns has resulted in the following data:

Population in town (in lakhs)	(X)	40	60	70	80	100
No. of Bus	(Y)	450	650	550	800	1000

Fit a linear regression of Y on X and estimate the number of scooters to be found in a town with a population of 180 lakhs. 6

Answer:

2. (a) (i) An Operating System is defined as a configuration of resources combined for the provision of good or services, Retail organizations, hospitals, bus and taxi services, tailors, hotels and dentists are all examples of operating systems. Any operating system converts inputs, using physical resources, to create outputs, the function of which is to satisfy customers wants. The creation of goods or services involve transforming or converting inputs into outputs. Various inputs such as capital, labour, and information are used to create goods or services using one or more transformation processes (e.g., storing, transporting, and cutting). It is important to note that goods and services often occur jointly. For example, having the oil changed in your car is a service, but the oil that delivered is a good. Similarly, house painting is a service, but the paint is a good. The goods-service combination is a continuum. It can range from primarily goods, with little service, to primarily service, with few goods. Because there are relatively few pure goods or pure services, companies usually sell product

packages, which are a combination of goods and services. There are elements of both good production and service delivery in these product packages.

(ii) Recent trends in production/operations management relate to global competition and the impact it has on manufacturing firms. Some of the recent trends are:

1. **Global Market Place**: Globalisation of business has compelled many manufacturing firms to have operations in many countries where they have certain economic advantage. This has resulted in a steep increase in the level of competition among manufacturing firms throughout the world.
2. **Production/Operations Strategy**: More and more firms are recognising the importance of production/ operations strategy for the overall success of their business and the necessity for relating it to their overall business strategy.
3. **Total Quality Management (TQM**): TQM approach has been adopted by many firms to achieve customer satisfaction by a never-ending quest for improving the quality of goods and services.
4. **Supply-Chain Management**: Management of supply-chain, from suppliers to final customers reduces the cost of transportation, warehousing and distribution throughout the supply chain.
5. **Lean Production:** Production systems have become lean production systems which use minimal amounts of resources to produce a high volume of high quality goods with some variety. These systems use flexible manufacturing systems and multi-skilled workforce to have advantages of both mass production and job production (or craft production).

(b) (i) Different authorities on marketing and production have devised several methods or techniques of demand forecasting. The forecasts may be result of what market people or buyers say about the product or they may be the result of statistical and quantitative techniques.

The most common methods of demand forecasting are:

1. Survey of buyer's intentions or the user's expectation method.
2. Collective opinion or sales force composite method.
3. Trend projection method.
4. Moving average method.

(ii) Computation of trend value

Population (in lakhs) X	No. of scooters demanded Y	Squares of population X^2	Product of population and No. of scooters demanded XY
40	450	1600	18000
60	650	3600	39000
70	550	4900	38500
80	800	6400	64000
100	1000	10000	100000
$\Sigma X = 350$	$\Sigma Y = 3450$	$\Sigma X^2 = 26500$	$\Sigma XY = 259500$

Regression equation of Y on X

$$Y = a + bX$$

To find the values of a and b we will have to solve the following two equations

$$\Sigma Y = na + b\Sigma X \quad \text{... (i)}$$

$$\Sigma XY = a\Sigma X + b\Sigma X^2 \quad \text{....(ii)}$$

By putting the values, we get

$$3450 = 5a + 350b \quad \text{... (iii)}$$

$$259500 = 350a + 26500b \quad \text{... (iv)}$$

By multiplying equation no. (iii) by 70 putting as equation (v) we get,

$$2,41,500 = 350a + 24500b \quad \text{... (v)}$$

By subtracting equation (v) from equation (iv), we get

$$18000 = 2000b$$

or,

$$2000 = 18,000$$

$$b = \frac{18000}{2000}$$

By substituting the value of b in equation no. (iii), we get

$$3450 = 5a + 350b$$

or $3450 = 5a + 350b$

or $3450 = 5a + 350\times 9$

or $3450 = 5a + 3150$

or $3450 - 3150 = 5a$

or $5a = 300$

or $a = \frac{300}{5} = 60$

$$Y = a + bX$$

or, $Y = 60 + 9X$

When $X = 180$ lakhs

then,

$$Y = 60 + 9\,(180)$$

or $Y = 60 + 1620$

or $Y = 1680$

3. (a) (i) What is Product design and define its objectives? 4

(ii) What are the factors which influences a product design? 4

(b) The following data is available for a manufacturing unit:

No. of operators	**:**	**15**
Daily working hours	**:**	**8**
No. of days per month	**:**	**25**
Std. production per month	**:**	**300 units**
Std. Labour hours per unit	**:**	**8**

The following information was obtained for November 2015:

Man days lost due to absentism	**:**	**30**
Unit produced	**:**	**240**
Idle Time	**:**	**276 man hours**

Find the following: —

(a) Percent absentism

(b) Efficiency of utilisation of labour

(c) Productive efficiency of labour

(d) Overall productivity of labour in terms of units produced per man per month. 8

Answer:

3. (a) (i) Product design is an activity under production and operation management functions. product design directly affects product quality, production costs and customer satisfaction. Hence, the design of product is crucial to success in today's global competition. A good product design can improve the marketability of a product by making it easier to operate or use, upgrading its quality, improving its appearance, and/or reducing manufacturing costs

The objectives of product design:

(i) The overall objective is profit generation in the long run.

(ii) To achieve the desired product quality.

(iii) To reduce the development time and cost to the minimum.

(iv) To reduce the cost of the product.

(v) To ensure productibility or manufacturability (design for manufacturing and assembly).

(ii) Factors Influencing Product Design:

(1) Customer requirements: The designers must find out the exact requirements of the customers to ensure that the products suit the convenience of customers for use.

(2) Convenience of the operator or user: The industrial products such as machines and tools should be so designed that they are convenient and comfortable to operate or use.

(3) Types of materials used: Discovery of new and better materials can improve the product design. Designers keep in touch with the latest developments taking place in the field of materials and components and make use of improved materials and components in their product designs.

(4) Work methods and equipment's: Designers must keep abreast of improvements in work methods, processes and equipment's and design the products to make use of the latest technology and manufacturing processes to achieve reduction in costs.

(5) Cost/Price ratio: In a competitive market, there is lot of pressure on designers to design products which are cost effective because cost and quality are inbuilt in the design.

(6) Product quality: The product quality partly depends on quality of design and partly on quality of conformance.

(7) Effect on existing products: New product designs while replacing existing product designs, must take into consideration the use of standard parts and components, existing manufacturing and distribution strategies and blending of new manufacturing technology with the existing one so that the costs of implementing the changes are kept to, the minimum.

(8) Packaging: Packaging is an essential part of a product and packaging design and product design go hand in hand with equal importance. Packaging design must take into account the objectives of packaging such as protection and promotion of the product.

(b) No. of days per month = 25
Daily working hrs. = 8
No. of operators = 15
No. of Man days per month = 15 × 25 = 375 Man days.
Total working hrs. per month = 375 × 8 = 3,000
Hours lost in absenteeism in a month = 30 × 8 = 240

(a) Present absenteeism: $\frac{240\ hrs\ x\ 100}{3000\ hrs}$ = 8 %

(b) Efficiency of utilization of labour: $\frac{standard\ labour\ hour\ to\ produce\ 240\ units}{Total\ labour\ hour}$ x 100

= $\frac{240\ x\ 8}{3000}$ x 100

= 64 %

(c) Standard time required to produce 240 units = 240 x 8 hrs = 1920 labour hrs

In NOV, man hours lost	30 days' x 8 =	240 hours
Idle time (in hours)		276 hours
Total loss of time		516 hrs
productive hours available in NOV		= 3000
less: Total loss of time		516
Actual labour hours		2484

Efficiency of labour = $\frac{std.labour\ hours}{Actual\ labour\ hour}$ = $\frac{1920\ x\ 100}{2484}$ = 77.3%

(d) 15 men produces 300 units,
Std. labour productivity = 300/15 = 20 units.
In November, overall productivity = 240/15 = 16 units.
i.e. productivity falls by 25%.

4. (a) The marketing time of Nestle India Ltd requires some household data from a different city before introducing their new product. The team has been ordered by the management to perform this job in two days, the coming Saturday and Sundays. So, the team has no option other than to spend half a day in each of the cities. the relevant data are given below:

Day and time	Probability of a household contact			
	City 1	City 2	City 3	City 4
Saturday morning	0.32	0.85	0.16	0.64
Saturday evening	0.60	0.56	0.95	0.80
Sunday morning	0.70	0.35	0.40	0.62
Sunday evening	0.10	0.72	0.64	0.90
No. of households expected to be interviewed	150	100	200	200

As an expert of Operations research in the company, you have been requested by the management to suggest the plan (visiting) to the team in the 4 cities so that the expected response may be optimized. 8

(b) After observing heavy congestion of customers over a time of Diwali marketing in a shopping mall, the mall administrator has decided to set up an additional counter in a nearby site. He has complied statistics relating to the customer's arrival pattern and service pattern as given below. He has also decided to evaluate the services by the using simulations technique.

Arrivals		Services	
Inter-arrival time (minutes)	**Probability**	**Service time (minutes)**	**Probability**
2	**0.22**	**4**	**0.28**
4	**0.30**	**6**	**0.40**
6	**0.24**	**8**	**0.22**
8	**0.14**	**10**	**0.10**
10	**0.10**		

Assume:

(i) The starting hours at 9.00 a.m.

(ii) Only one counter is set up.

(iii) The following12 Random Numbers are to be used to depict the customer arrival pattern:

78, 26, 94, 08, 46, 63, 18, 35, 59, 12, 97 and 82

The following 12 Random Numbers are to be used to depict the service pattern:

44, 21, 73, 96, 63, 35, 57, 31, 84, 24, 05, 37

You are required to find out the probability of being idle and average time spent by a customer waiting in queue. 8

Answer:

4. (a) Step 1:

Expected no. of household responses:

Day and time	City 1	City 2	City 3	City 4
Saturday morning	0.32x150m=48	85	32	128
Saturday evening	90	56	190	160
Sunday morning	105	35	80	124
Sunday evening	15	72	128	180

The assignment algorithm (Hungarian Method) can now be used after converting into minimization problem by subtracting the highest response figure (190) from each element of above matrix

Step 2 :

Day and time	City 1	City 2	City 3	City 4
Saturday morning	190-48=142	105	158	62
Saturday evening	100	134	0	30
Sunday morning	85	155	110	66
Sunday evening	175	118	62	10

Step 3: Row MINIMA

Day and time	City 1	City 2	City 3	City 4
Saturday morning	142-62=80	43	96	0
Saturday evening	100	134	0	30
Sunday morning	19	89	44	0
Sunday evening	165	108	52	0

Step 4 : column MINIMA

Day and time	City 1	City 2	City 3	City 4	
Saturday morning	~~61~~	~~0~~	~~96~~	~~0~~	L2
Saturday evening	~~81~~	~~91~~	~~0~~	~~30~~	L3
Sunday morning	~~0~~	~~46~~	~~44~~	~~0~~	L4
Sunday evening	146	65	52	0	
				L1	

Minimum No. s of lines are drawn to cover maximum zeroes. Since number of lines are equal to the order (4x4) of the matrix an optimal solution is reached and we make the assignments as shown in table 5 below:

Day and time	City 1	City 2	City 3	City 4
Saturday morning	61	0	96	0
Saturday evening	81	91	0	30
Sunday morning	0	46	44	0
Sunday evening	146	65	52	0

Day & Time		City	Response
Saturday morning	to	2	85
Saturday evening	to	3	190
Sunday morning	to	1	105
Sunday evening	to	4	180

Hence optimal number of responses = 85+190 +105+180=560.

(b)

Inter-arrival time				Service time			
Minutes	Probability	Cumulative probability	Range of Random No.	Minutes	Probability	Cumulative probability	Range of Random No.
2	0.22	0.22	00-21	4	0.28	0.28	00-27
4	0.30	0.52	22-51	6	0.40	0.68	28-67
6	0.24	0.76	52-75	8	0.22	0.90	68-89
8	0.14	0.90	76-89	10	0.10	1.00	90-99
10	0.10	1.00	90 - 99	–	–	–	–

Sl. No.	Random No. for inter arrival time	Inter arrival time (Mins.)	Entry time in queue as per clock	Service start time as per clock	Random no for service time	Service time (Mins.)	Service end time as per clock	Waiting time of customer (Mins.)	Idle time (Mins.)
1	78	8	9.08	9.08	44	6	9.14	-	8
2	26	4	9.12	9.14	21	4	9.18	2	-
3	94	10	9.22	9.18	73	8	9.30	-	4
4	08	2	9.24	9.30	96	10	9.40	6	-
5	46	4	9.28	9.40	63	6	9.46	12	-
6	63	6	9.34	9.46	35	6	9.52	12	-
7	18	2	9.36	9.52	57	6	9.58	16	-
8	35	4	9.40	9.58	31	6	10.04	18	-
9	59	6	9.46	10.04	84	8	10.12	18	-
10	12	2	9.48	10.12	24	4	10.16	24	-
11	97	10	9.58	10.16	05	4	10.20	18	-
12	82	8	10.06	10.20	37	6	10.26	14	-
Total Time								**140**	**12**

Average time spent by the customer waiting in the queue = 140/12 = 11.67 minutes
Probability of idle time of petrol station = Total Idle time = 12/86 = 0.1395 time of the Service Channel*

* Service End Time - 10.26 Hrs. Service Channel opened at 9.00 hrs. i.e. Total Time of the Service Channel = 1 hr. 26 Mins = 86 Mins

5. (a) (i) What are the difference between CPM and PERT? 3

(ii) A project with normal duration and cost along with crash duration and cost for each activity is given below:

Activity	Normal time (Hrs.)	Normal cost (₹)	Crash time (Hrs.)	Crash cost (₹)
1-2	**5**	**200**	**4**	**300**
2-3	**5**	**30**	**5**	**30**
2-4	**9**	**320**	**7**	**480**
2-5	**12**	**620**	**10**	**710**
3-5	**6**	**150**	**5**	**200**
4-5	**0**	**0**	**0**	**0**
5-6	**8**	**220**	**6**	**310**
6-7	**6**	**300**	**5**	**370**

Overhead cost is ₹ 50 per hour.

Required:

Draw network diagram and identify the critical path. 6

(b) The data on the running costs per year and resale prices of equipment A whose purchase price is ₹ 3,00,000are as follows :

Years	1	2	3	4	5	6	7
Running cost (₹)	45,000	57,000	69,000	87,000	1,08,000	1,35,000	1,65,000
Resale value (₹)	1,50,000	75,000	37,500	18,000	12,000	12,000	12,000

(i) What is the optimum period of replacement?

(ii) When equipment A is two years. old equipment B which is a new model for the same usage is available. The optimum period for replacement is 4 years with an average cost of ₹1,08, 000.Should equipment A be changed with equipment B? If so, when? [7]

Answer:

5. (a) (i) Difference in PERT and CPM

Although these techniques (PERT and CPM) use the same principles and are based on network analysis yet they are different in the following respects from each other:

(1) PERT is appropriate where time estimates are uncertain in the duration of activities as measured by optimistic time, most likely time, and pessimistic time, whereas CPM (Critical Path Method) is good when time estimates are found with certainty. CPM assumes that the duration of every activity is constant and therefore does not deal with uncertainty in time.

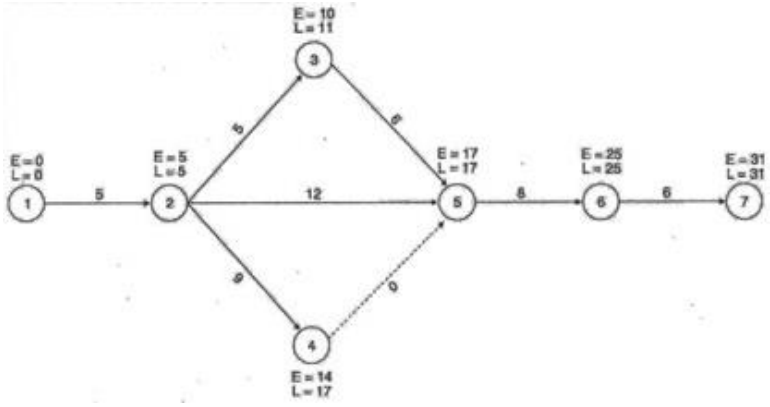
(2) PERT is concerned with events which are the beginning or ending points of operation while CPM is concerned with activities.

(3) PERT is suitable for non-repetitive projects while CPM is designed for repetitive projects.

(4) PERT can be analysed statistically whereas CPM not.

(5) PERT is not concerned with the relationship between time and cost, whereas CPM establishes a relationship between time and cost and cost is proportionate to time.

(ii)



Paths →	1-2-5-6-7 (Let's denote this by A)	1-2-3-5-6-7 (Let's denote this by B)	1-2-4-5-6-7 (Let's denote this by C)
Duration	31 hours	30 hours	28 hours
The critical path is A. Its duration is 31 hours			

(b) Determination of optimal replacement period

Year of Service n	Running cost (₹) R(n)	Cumulative running cost (₹) $\sum R(n)$	Resale Price (₹) S	Depreciation Cost (₹) C - S	Total cost (₹) TC(n)	Average cost per year (₹) ATC (n)
(1)	(2)	(3)	(4)	(5)=3,00,00 - S	(6) = (3)+(5)	(7)=(5)/(1)
1	45,000	45,000	1,50,000	1,50,000	1,95,000	1,95,000
2	57,000	1,02,000	75,000	2,25,000	3,27,000	1,63,500
3	69,000	1,71,000	37,500	2,62,000	4,33,000	1,44,333.33
4	87,000	2,58,000	18,000	2,82,000	5,40,000	1,35,000
5	1,08,000	3,66,000	12,000	2,88,000	6,54,000	**1,30,800**
6	1,35,000	5,01,000	12,000	2,88,000	7,89,000	1,31,500
7	1,65,000	6,66,000	12,000	2,88,000	9,54,000	1,36,285.714

Since the average cost corresponding to the 5- year period is minimum, the optimum period for replacement is 5 years.

(ii) As the lowest average cost for equipment B is smaller than that for equipment A, it is beneficial to change the Equipment. To decide the time of replacement A by equipment B, the average cost of equipment A in the successive years is computed as shown in Table below:

Average Running Cost When Equipment is 2 years' old.

Years of Service	Running Cost (₹)	Depreciation Cost (₹)	Total Cost (₹)	Cumulative Cost (₹)	Average Cost (₹)
3	68,000	75,000-37,500=37,500	1,06,500	1,06,500	1,06,500
4	87,000	37,500-18,000=19,500	1,06,500	2,13,000	1,06,500
5	1,08,000	6000	1,14,000	3,27,000	1,09,033
6	1,35,000	--	1,35,000	4,62,000	1,15,500
7	1,65,000	--	1,65,000	6,27,000	1,25,400

Hence, equipment A should be replaced with equipment B, when it is four years' old.

Section – B : (Strategic Management)

PART - I

6. (a) Choose the correct Answer: (6x1=6)

(i) A corporate strategy can be defined as:
- **(a) A list of actions about operational planning and statement of organisation structure and control system;**
- **(b) A statement of how to compete, direction of growth and method of assessing environment;**
- **(c) Abatement of organisation's activities and allocation of resources;**
- **(d) A course of action or choice of alternatives, specifying the resources required to achieve certain stated objectives;**

(ii) A strategic business unit (SUB) is defined as a division of an organisation:
- **(a) That help in the marketing operation;**
- **(b) That enable managers to have better control over the resources;**
- **(c) That help in the choice of technology;**
- **(d) That help in the allocation of scarce resources;**

(iii) McKinney's 7-s framework consists of:
- **(a) Structure, strategy, software, skills, styles, staff and supervision**
- **(b) Structure, strategy, systems, skills, styles, syndication and shared values.**
- **(c) Structure, strategy, systems, skills, steering power, styles and shared values.**
- **(d) Structure, strategy, staff, skills, systems, shared values, super ordinate goal.**

(iv) The Product Market matrix comprising of Strategies of Penetration, Market Development Product Development and Diversification was first formulated by
- **(a) Ansoff**
- **(b) Drucker**
- **(c) Porter**
- **(d) Andrews**

(v) 'Niche' is similar to the
- **(a) Growth strategy**
- **(b) Milking strategy**
- **(c) Flanking strategy**
- **(d) Survival strategy**

(vi) For an actor in Bollywood, his outstanding performance would be a /an
- **(a) Asset**
- **(b) Strategic Asset**
- **(c) Core competency**
- **(d) Capability**

Answer:

6. (a)

(i)	(d) a course of action or choice of alternatives, specifying the resources required to achieve certain stated objectives
(ii)	(b) that enable managers to have better control over the resources.
(iii)	(d) Structure, strategy, staff, skills, systems, shared values, super ordinate goal.
(iv)	(a) Ansoff
(v)	(C) Flanking strategy
(vi)	(c) Core competency

PART II

(Answer any two questions out of three questions)

7. (a) What are the difference between vision and mission? Discuss in brief the formulation of Organizational Mission. 6

(b) Explain the objective of SWOT analysis and its advantages and disadvantages. 6

Answer:

7. (a) Vision is a statement of the future. It articulates the basic characteristic that shape organisations strategy. It indicates where the organisation is headed and what it intends to be.

There is a quote that 'great visionary can foresee the future in advance and take steps accordingly to be at forefront'. So, we can conclude that;

1. Vision provide a road map to Company's future
2. Vision indicates the kind of company management is trying to create for future.
3. Vision specifies about company intention and capabilities to adapt to new technologies
4. Vision also specifies management policies towards customers and societies.

A number of organisations have summed up their visions in a brief phrase for e.g.

- Nike: 'To bring innovation and inspiration to ever athlete in the world.'
- Scotland Yard: 'to make London the safest major city in the world.'
- Dabur: 'Dedicated to the health and wellbeing of every household.'
- Infosys: 'To be a globally respected corporation that provides best-of- breed business solutions, leverage technology, delivered by best- in class people.'

The term 'mission' implies the fundamental and enduring objectives of an organisation that set it apart from other organisations of similar nature The mission statement of an organisation can be either product oriented or customer oriented. A product-oriented business definition focuses on the characteristics of the products sold and the markets served, not on which kinds of customer needs the products are satisfying.

Mission statement of some organisations and the nature of the statement

- Bharat Gas: To make Bharat Gas a dominant brand in the segments we market, by becoming trendsetters in customer service, safety and quality. (It is a customer oriented mission statement).
- Nirma: Nirma is a customer focused company committed to consistently offer better quality products and services that maximise value to the customer. (It is a customer oriented mission statement).
- Microsoft corporation: to empower every person and every organisation on the planet to achieve more. (It is a customer oriented mission statement).

Formulation of Organisational Mission:

Organisation cannot declare the mission just on some great whim and fancy, it should be based on organisations' existing capabilities and achievable milestones. Here are some guidelines for formulation of "mission" statement

- It should be based on existing business capabilities "Who we are and what we do?"
- It should follow the long term strategy principles
- Profit making should not be the only mission of organisation
- It should be logical extension of business existing capabilities
- It should clearly and precisely present the future orientation of business

(b) The objectives of SWOT analysis:

The acronym SWOT stands for Strengths, Weaknesses, Opportunities, and Threats.

The objectives of SWOT analysis is to express the qualitative and quantitative areas of the business which have strengths to exploit, and the areas have weaknesses which must be improved. Although every area has to investigate, only the areas of significant strength or weakness should warrant further attention. While finalizing the corporate plan together with corporate objectives growth strategy, it should be necessary to make a review of the corporate strength and weakness in connection with its mission and objectives.

Corporate strengths and weaknesses can be broadly enumerated as under:

Corporate Strengths:

Highly professionalised managerial group including directors and the chief executive an environment prevailing for commitments to jobs and responsibility with team spirit by the work force

Corporate Weaknesses:

Similar to Corporate strengths, there may be corporate weaknesses too.

Opportunities:

The following may be termed as 'Opportunities' which should be timely utilised and availed of by the organisation gainfully:

(i) Seasonal/climatically demand of products.
(ii) Global markets for the company's products/services (Export opportunities).
(iii) Rural markets to explore and to penetrate.
(iv) To explore the markets in the undeveloped/under-developed/developing states/places.

(v) To avail of the incentives/concessions declared by Central and State. Governments
(vi) Diversifications opportunities
(vii) Mergers/acquisition opportunities

Threats:

(i) Competition
(ii) Price cutting war
(iii) Free imports
(iv) Industrial unrest
(v) Political instability

Advantages and disadvantages of SWOT analysis:

SWOT analyses are simple and easy to list but hard to implement fully. It takes time and research to completely analyze the situation. SWOT analysis might not be able to provide results for each factor plus for the analysis to be successful, it requires expertise which would analyze all possible threats and weaknesses and turn them into strength and opportunity. It requires resources and capital to perform and a positive outcome cannot be guaranteed. SWOT analysis is considered the best because it focuses on internal and external factors both while only focuses on external factors. Some top companies like Ford, Microsoft and Sony prefer monthly SWOT analysis as their markets are expanding and growing every month and they consider internal factors of the company important.

8. (a) Discuss the various stages in Strategic Planning. 6

(b) Write a short note on Strategic Business Unit. 6

Answer:

8. (a) The various stages in strategic planning are given below:

Stage I: Strategic Option Generations

At this stage, a variety of alternatives are considered, relating to the firm's product and markets, its competitors and so forth. Examples of strategies might be:

(a) increase market share
(b) penetration into international market
(c) concentration on core competencies
(d) acquisition or expansion etc.

Stage II - Strategic Options Evaluation

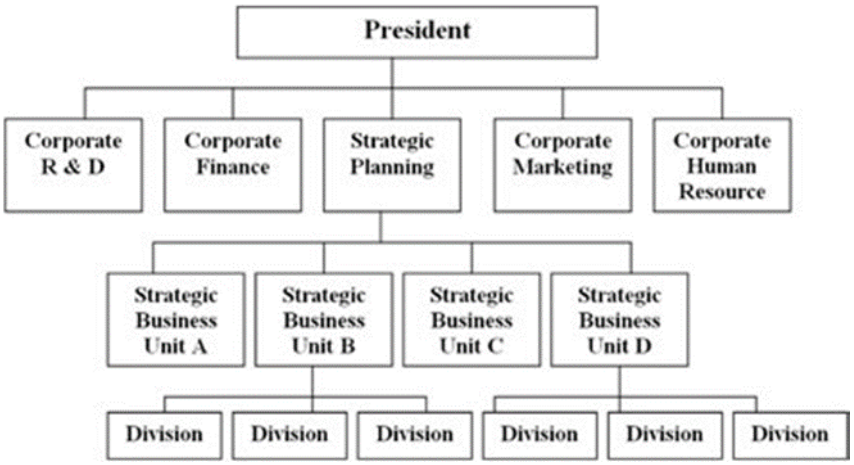
Each option is then examined on its merits.

(a) does it increase existing strengths?
(b) does it alleviate existing weaknesses?
(c) is it suitable for the firm's existing position?
(d) is it acceptable to stakeholders?

Stage III - Strategic Selection

It involves choosing between the alternative strategies. This process is strongly influenced by the values of the managers in selecting the strategies.

(b) SBU groups similar divisions into "Strategic Business Units" and then delegate's authority and responsibility of each unit to a senior executive who is normally identified as CEO or MD of that SBU. It is an extension of Divisional structure.



SBU Structure

Big organisation like Unilever, etc. have many SBUs for their different categories of products like Cosmetics, Food products and Beverages, etc. and each is managed through separate unit head.

Advantages:

(i) Promotes accountability since units' heads are responsible for individual SBU profitability

(ii) Career development opportunities are further higher in this structure

(iii) Allow better control of categories of products manufacturing, marketing and distributions

(iv) Helps to expand in different related and unrelated businesses

Disadvantages:

(i) May provide inconsistent approach to tackle customers, etc. because each unit may work in it's own way to handle situations

(ii) High cost approach

Some of major reasons of using SBU approach are as follow:

- A scientific method of grouping the businesses of a multi-business corporation which helps the firm in strategic planning.
- An improvement over the geographical grouping of businesses and strategic planning based on locational units.
- An SBU is a grouping of related businesses that can be taken up for strategic planning distinct from the rest of the businesses.

- Grouping the businesses on SBU lines helps the firm in strategic planning by removing the ambiguity and confusion generally seen in grouping businesses.
- Each SBU is a separate business from the strategic planning standpoint. In the basic factors, viz., mission, objectives, competition and strategy-one SBU will be distinct from another.
- Each SBU will have it's own distinct set of competitors and it's own distinct strategy.
- Each SBU will have a CEO. He will be responsible for strategic planning for the SBU and it's profit performance; he will also have control over most of the factors affecting the profit of the SBU.

The three most important Characteristics of SBU are:

- It is a single business or a collection of related businesses which offer scope for independent planning and which might feasibly standalone from the rest of the organisation.
- Has its own set of competitors.
- Has a manager who has responsibility for strategic planning and profit performance, and who has control of profit-influencing factors.

9. Write Short notes on any three questions out of the following four questions. (3x4=12)

(a) Strategy formulation

(b) BCG Theory

(c) BPR

(d) ADL matrix

Answer:

9. (a) Strategic formulation:

(i) Develop and evaluate strategic alternatives

(ii) Select appropriate strategies for all levels in the organisation that provide relative advantage over competitors

(iii) Match organizational strengths to environmental opportunities

(iv) Correct weaknesses and guard against threats

Implementation of strategy

(i) effectively fitting organizational structure and activities to the environment

(ii) The environment dictates the chosen strategy; effective strategy implementation requires an organisational structure matched to its requirements. Evaluating results

(iii) How effective have strategies been?

(iv) What adjustments, if any, are necessary

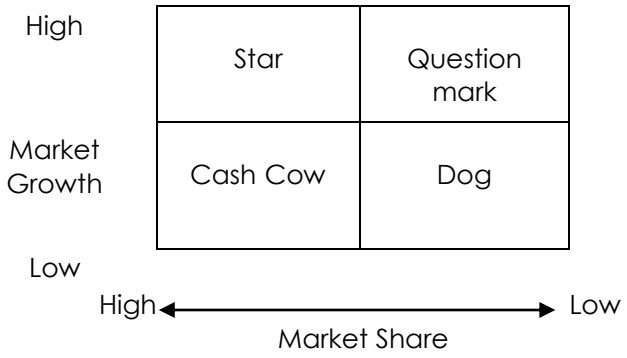
Strategy formulation as function wise:

Strategy often require changes in the way an organization is structured for two major reasons:

1. Structure largely dictates how objectives and policies will be established;
2. Structures dictates how resources will be allocated.

The choice of structure appears contingent on the strategy of the firm in terms of size, diversity of the products /services offered, and marked served. Whether this is due to inertia, organizational politics, or a realistic assessment of the relative costs of immediate structural change, historical evidence suggests that the existing structure will be maintained and not radically redesigned until a strategy's profitability is increasingly disproportionate with increasing sales.

(b) **BCG THEORY**: The Boston Consulting Group (BCG)'s matrix analyses 'products and businesses by market share and market growth:



This growth/share matrix for the classification of products into cash cows, dogs, rising stars and question marks is known as the Boston classification for product-market strategy.

(i) Stars are products with a high share of a high growth market. In the short term these require capital expenditure, in excess of the cash they generate, in order to maintain their market position, but promise high returns in the future.

(ii) In due course, however, stars will become cash cows, with a high share of a low-growth market. Cash cows need very little capital expenditure and generate high levels of cash income. The important strategic feature of cash cows is that they are already generating high cash returns, which can be used to finance the stars.

(iii) Question marks are products in a high-growth market, but where they have a low market share. A decision needs to be taken about whether the products justify considerable capital expenditure in the hope of increasing their market share, or whether they should be allowed to 'die' quietly as they are squeezed out of the expanding market by rival products. Because considerable expenditure would be needed to turn a question mark into a star by building up market share, question marks will usually be poor cash generators and show a negative cash flow.

(iv) Dogs are products with a low share of a low growth market. They may be ex-cash cows that have now fallen on hard times. Dogs should be allowed to die, or should be killed off. Although they will show only a modest net cash outflow, or even a modest net cash inflow, they are 'cash traps' which tie up funds and provide a poor return, on investment, and not enough to achieve the organisation's target rate of return.

Limitations of the BCG Model:

The BCG model analyses products in the light of two variables: the growth in the market as a whole, and the growth of the product's share of the market in relation to other products. It suggests that there is a relationship between these variables and the product's propensity to generate cash or consume it. It rests on the assumption that the firm with the highest market share can be the lowest cost producer. The model suggests that cash cows should be used to fund stars. There are a number of limitations to the model (and remember that it is only a model, and any model necessarily simplifies the real world which it tries to depict).

(c) **BPR:** Business process re-engineering (BPR) is a business management strategy, originally pioneered in the early 1990s, focusing on the analysis and design of workflows and processes within an organization. BPR aimed to help organizations fundamentally rethink how they do their work in order to dramatically improve customer service, cut operational costs, and become world-class competitors. BPR seeks to help companies radically restructure their organizations by focusing on the ground-up design of their business processes.

The whole process of BPR in order to achieve the above mentioned expected results is based on key steps-principles which include redesign, retool, and re-orchestrate. Each step-principle embodies the actions and resources as presented in the table below.

REDESIGN	**RETOOL**	**RECORCHESTRATE**
• Simplify • Standardize • Empowering • Employeeship • Groupware • Measurements	• Networks • intranets • extranets • Work Flow	• synchronize • process • IT • human resources

Creating the new enterprise involves considerable change in virtually everything to do with people's working lives. Rather than fixing the old, we set out to create the new. There is a fundamental transformation occurring in business - in terms of its structure, processes, people, and technology. The table following presents the changes in that occur in the business under BPR.

(d) **ADL matrix**: The ADL portfolio matrix suggested by Arthur D. Little (ADL) consists of 20 cells, identified by competitive position and its stage of industry maturity. In this matrix, the stage of industry maturity is identified in four stages viz., embryonic, growth, maturity and ageing. The competitive position is categorized into five classes viz., dominant, strong, favourable, tenable and weak. The purpose of the matrix is to establish the appropriateness of a particular strategy in relation to these two dimensions.

The position within the life cycle and of the company is determined in relation to eight external factors (or disciplines) of the evolutionary stage of the industry. These are:

(a) market growth rate
(b) growth potential
(c) breadth of product line
(d) number of competitors
(e) spread of market share among the competitors
(f) customer loyalty
(g) entry barriers
(h) technology

It is the balance of these factors which determines the life cycle. The competitiveness of the organization can be established by looking at the characteristics of each category. The weights must be defined to calculate the matrix position of a particular business. The matrix location of each unit can be used to formulate a natural strategy to accomplish the business goals of the firm.