

Paper 9 – OPERATIONS MANAGEMENT & 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

1. (a) Choose the correct answer:

[1x10=10]

- (i) Generally the size of the order for production in Job production is :
 - (a) Small
 - (b) Large
 - (c) Medium
 - (d) Very large

- (ii) The activity of specifying when to start the job and when to end the job is known as:
 - (a) Planning
 - (b) Scheduling
 - (c) Timing
 - (d) Follow-up

- (iii) In job production system, we need:
 - (a) More unskilled labours
 - (b) Skilled labours
 - (c) Semi-skilled labours
 - (d) Old people

- (iv) The lead-time is the time:
 - (a) To place holders for materials
 - (b) Time of receiving materials
 - (c) Time between receipt of material and using materials,
 - (d) Time between placing the order and receiving the materials

- (v) The method used in scheduling a project is:
 - (a) A schedule of break-down of orders
 - (b) Outline master programme
 - (c) PERT & CPM
 - (d) Schedule for large and integrated work

- (vi) The act of going round the production shop to note down the progress of work and feedback the information is known as:
 - (a) Follow up
 - (b) Dispatching
 - (c) Routing
 - (d) Trip card

- (vii) MRP stands for:
 - (a) Material requirement planning
 - (b) Material reordering planning
 - (c) Material requisition procedure
 - (d) Material recording procedure

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

- (a) Material chart
- (b) Gantt chart
- (c) Route chart
- (d) Inspection chart

(ix) Variety reduction is generally known as:

- (a) Less varieties
- (b) Simplification
- (c) Reduced varieties
- (d) None of the above

(x) Conversion of inputs into outputs is known as:

- (a) Application of technology
- (b) operations management
- (c) Manufacturing products
- (d) product

(b) Match the products in column-I with production centers in column –II: [1x6=6]

I	II
(A) Electricity	(a) Blast Furnace
(B) Petrol	(b) generator
(C) Iron	(c) Refinery
(D) Cloth	(d) Assembly line
(E) Car	(f) spinning Mill
(F) Cotton yarn	(g) power Loom

(c) State whether the following statements are True or False: [1x6=6]

- (i) Method study should precede work measurement ()
- (ii) Increased productivity leads to cost reduction ()
- (iii) A good materials handling system always consists of conveyors ()
- (iv) Project costs increase as the duration of the project increases ()
- (v) It is desirable to conduct work measurement after method study()
- (vi) No handling is the best handling ().

Answer any three questions from the following: [3x16=48]

2. **(a)** What are the principle functions of an operating system? **[8]**

(b) What are the characteristics of a good plant layout? **[8]**

3. **(a)** Mention any six characteristics of a good Product Design. **[6]**

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

No. of operators	:	15
Daily working hours	:	8
No. of days per months	:	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 absenteeism	:	30
Unit produced	:	240
Idle Time	:	276 man hours

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Find the following:-

- (a) Percent absenteeism
- (b) Efficiency of utilization of labour
- (c) Productive efficiency of labour
- (d) Overall productivity of labour in terms of units produced per man per month. **[10]**

4. (a) A captain of a cricket team has to allot five middle batting positions to five batsmen. The average runs scored by each batsman at these positions are as follows:

Batsmen	Batting Position					
		III	IV	V	VI	VII
A		40	40	35	25	50
B		42	30	16	25	27
C		50	48	40	60	50
D		20	19	20	18	25
E		58	60	59	55	53

Make the assignment so that the expected total average runs scored by these batsmen are maximum. **[10]**

(b) Table shows the time remaining (number of days until due date) and the work remaining (number of day's work) for 5 jobs which were assigned the letters A to E as they arrived to the shop. Sequence these jobs by priority rules viz., (a) FCFS, (b) EDD, (c) LS (d) SPT and (e) LPT. **[6]**

Job	Number days until due date	Number of days work remaining
A	8	7
B	3	4
C	7	5
D	9	2
E	6	6

5. (a) project with the following data is to be implemented,. Draw the network and find the critical path.

Activity	Predecessor	Duration(days)	Cost (₹ day)
A	-	2	50
B	-	4	50
C	A	1	40
D	B	2	100
E	A,B	3	100
F	E	2	60

1. What is the minimum duration of the project?
2. Draw a Gantt chart for early start schedule.
3. Determine the peak requirement money and day on which it occurs above schedule. **[8]**

(b) A public transport system is experiencing the following number of breakdowns for months over the past 2 years in their new fleet of vehicles: **[8]**

Number of breakdowns	0	1	2	3	4
Number of months this occurred	2	8	10	3	1

Each break down costs the firm an average of ₹ 2,800. For a cost of ₹ 1,500 per month, preventive maintenance can be carried out to limit the breakdowns to an average of one per month. Which policy is suitable for the firm?

Section – B

6. 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 organization structure and control system;
 - (b) A statement of how to compete, directions of growth and method of assessing environment;
 - (c) Abatement of organization's activities and allocation of resources;
 - (d) A course of action or choice of alternatives, specifying the resources required to achieve certain stated objectives;
 - (e) A statement of where and how the company will prefer to operate.
- (ii) A strategic business unit (SBU) is defined as a division of an organization:
- (a) That help in the marketing operations;
 - (b) That enable managers to have better control over the resources;
 - (c) The help in the choice of technology;
 - (d) that help in the allocation of scarce resources;
 - (e) That help in identifying talents and potentials of people
- (iii) Benchmarking is:
- (a) The analytical tool to identify high cost activities based on the 'Pareto Analysis'.
 - (b) The search for industries best practices that lead to superior performance;
 - (c) The simulation of cost reduction schemes that help to build commitment and improvement of actions;
 - (d) The process of marketing and redesigning the way a typical company works;
 - (e) The framework that earmarks a linkage with suppliers and customers;
- (iv) What are enduring statements of purpose that distinguish one business from other similar firms:
- (a) Policies
 - (b) Mission statements
 - (c) Objectives
 - (d) Rules
 - (e) Nature of ownership
- (v) Indian Airlines decreasing the airfare on the Delhi – Mumbai sector following the introduction of the no frills airlines would be an example of
- (a) Cost leadership
 - (b) Price leadership
 - (c) Product differentiate
 - (d) Focus
 - (e) Market retention
- (vi) Question mark in BCG Matrix is an investment, which
- (a) Yields low current income but has bright growth prospects
 - (b) Yields high current income and has bright growth prospects
 - (c) Yields high current income and has bleak growth prospects
 - (d) Yields low current income and has bleak growth prospects

Answer any one question from the following:

[1x12=12]

7. (a) What are differences between Vision and Mission? **[5]**
(b) Explain the objective of SWOT analysis and its advantages and criticism? **[7]**

8. (a) Discuss various stages in strategic planning. [6]
(b) Define SBU. What are its merits & demerits? [6]
9. **Write a short note on any of the following three questions:** [3x4=12]
(a) Strategic planning;
(b) Environment Analysis;
(c) BCG Matrix;
(d) Marketing mix.