

**Paper 9 – OPERATIONS MANAGEMENT  
&  
STRATEGIC MANAGEMENT**

**Paper 9- OPERATIONS MANAGEMENT & STRATEGIC MANAGEMENT**

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) 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.
  
- (ii) MRP stands for :
  - (a) Material requirement planning
  - (b) Material reordering planning
  - (c) Material requisition procedure
  - (d) Material recording procedure
  
- (iii) Conversion of inputs into outputs is known as :
  - (a) Application of technology
  - (b) Operations management
  - (c) Manufacturing products
  - (d) Product
  
- (iv) Long range forecasting is useful in :
  - (a) plan for research and development
  - (b) to schedule jobs in job production
  - (c) in purchasing the material to meet the present production demand
  - (d) to access man power required in the coming month
  
- (v) JIT stands for :
  - (a) Just in time purchase
  - (b) Just in time production
  - (c) Just in time use of materials
  - (d) Just in time order the material
  
- (vi) The act of releasing the production documents to production department is known as :
  - (a) Routine
  - (b) Scheduling
  - (c) Expediting
  - (d) Dispatching
  
- (vii) Addition of value to raw materials through application of technology is :
  - (a) Product
  - (b) Production
  - (c) Advancement
  - (d) Transformation
  
- (viii) Arrangement of machines depending on sequence of operations happens in :
  - (a) Process Layout
  - (b) Product Layout
  - (c) Hybrid Layout
  - (d) Group Technology Layout

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(ix) The aims at finding the best and most efficient way of using the available resources-men, materials, money and machinery :

- (a) Time Study
- (b) Work Study
- (c) Method Study
- (d) Job Evaluation

(x) Most suitable layout for continuous production is :

- (a) Line layout
- (b) Process layout
- (c) Group technology
- (d) Matrix layout

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

I	II
1. Electricity	(a) Blast Furnace
2. Petrol	(b) Generator
3. Iron	(c) Refinery
4. Cloth	(d) assembly Line
5. Car	(e) Smithy
6. Cotton Yarn	(f) Spinning Mill
7. Forgings	(g) Power Loom

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

- (i) General purpose machine are less prone to obsolescence ( )
- (ii) It is desirable to conduct work measurement after method study ( )
- (iii) Increase in productivity leads to retrenchment of work force ( )
- (iv) Increased productivity leads to cost reduction ( )
- (v) Activity sampling is not a technique of Job Evaluation ( )
- (vi) Production planning and control is essentially concerned with the control of Finished goods ( )

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

2. (a) What are the characteristics of modern operation function? [8]

(b) With the help of following data project the trend of sales for the next five years:

Years	2002	2003	2004	2005	2006	2007
Sales (in lakhs)	100	110	115	120	135	140

[8]

3. (a) Mention any six characteristics of a good Product Design. [3+7=10]

(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

Find the following:-

- (i) Percent absenteeism

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- (ii) Efficiency of utilization of labour
- (iii) Productive efficiency of labour
- (iv) Overall productivity of labour in terms of units produced per man per month. [6]

4. (a) The following jobs have to be shipped a week from now (week has 5 working days)

Job	A	B	C	D	E	F
Number of day's work remaining	2	4	7	6	5	3

Sequence the jobs according to priority established by (a) least slack rule (b) critical ratio rule. [10]

(b) A book store wishes to carry 'Ramayana' in stock. Demand is probabilistic and replenishment of stock takes 2 days (i.e. if an order is placed on March 1, it will be delivered at the end of day on March 3). The probabilities of demand are given below:

Demand (daily)	0	1	2	3	4
Probability	0.005	0.10	0.30	0.45	0.10

Each time an order is placed, the store incurs an ordering cost of ₹10 per order. The store also incurs a carrying cost of ₹ 0.50 per book per day. The inventory carrying cost is calculated on the basis of stock at the end of each day.

The manager of the bookstore wishes to compare two options for his inventory decision.

- A. Order 5 books when the inventory at the beginning of the day plus order outstanding is less than 8 books.
- B. Order 8 books when the inventory at the beginning of the day plus order outstanding is less than 8.

Currently (beginning 1st day) the store has a stock of 8 books plus 6 books ordered two days ago and expected to arrive next day.

Using Monte-Carlo Simulation for 10 cycles, recommend, which option the manager, should choose

The two digit random numbers are given below:

89	34	70	63	61	81	39	16	13	73
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[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. [6]

(b) Indian Electronics, manufactures TV sets and carries out the picture tube testing for

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2000 hours. A sample of 100 tubes was put through this quality test during which two tubes failed. If the average usage of TV by the customer is 4hours/day and if 10,000 TV sets were sold, then in one year how many tubes were expected to fail and what is the mean time between failures for these tubes? [10]

### SECTION – B

6. (a) Choose the correct Answer: [1x6=6]

- (i) 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
- (ii) 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
- (iii) Typically profits are highest in which stage of the industry life-cycle?
- (a) Introduction
  - (b) Growth
  - (c) Maturity
  - (d) Decline
- (iv) Successful differentiation strategy allows the company to:
- (a) gain buyer loyalty to its brands
  - (b) charge too high a price premium
  - (c) depend only on intrinsic product attributes
  - (d) have product quality that exceeds buyers needs
  - (e) segment a market in to distinct group of buyer
- (v) The managerial task of implementing strategy primarily falls upon the shoulders of :
- (a) The Chief Executive Officer (CEO);
  - (b) First line supervisors, who have day-to-day responsibility for seeing that key activities are done properly;
  - (c) All managers, each attending to what needs to be done in their respective areas of authority and responsibility;
  - (d) All of the above.
- (vi) 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

Answer any one question from the following: [1x12=12]

7. (a) What do you mean by strategy? State its features. [6]

(b) Enlist the advantage of Strategic Management. [6]

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8. (a) Distinguish between Strategic Planning and Strategic Management [6]  
(b) Discuss Mc Kinsey's 7-s frame work. [6]
9. Write a short note on any of the following three questions: [4×4=16]
- (a) Strategic Management Framework;
  - (b) Marketing Mix;
  - (c) Functional Organizational Structure;
  - (d) Matrix Organization Structure.