

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) Number of product varieties that can be manufactured in Mass production is:
 - (a) One only
 - (b) Two only
 - (c) Few varieties in large volumes
 - (d) Large varieties in small volumes

- (ii) Routing and Scheduling becomes relatively complicated in
 - (a) Job production
 - (b) Batch production
 - (c) Flow production
 - (d) Mass production

- (iii) 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 assess man power required in the coming month

- (iv) The scope of production planning and control is:
 - (a) Limited to production of products only
 - (b) Limited to production of services only
 - (c) Limited to production of services and products only
 - (d) Unlimited, can be applied to any type of activity

- (v) Most suitable layout for job production is:
 - (a) Line layout
 - (b) Matrix layout
 - (c) Process layout
 - (d) Product layout

- (vi) 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

- (vii) The first stage in production planning is:
 - (a) Process planning
 - (b) Factory planning
 - (c) Operation planning
 - (d) Layout planning

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- (viii) Total station time/cycle time x Number of work stations)x100 is known as:
- Line efficiency
 - Line smoothness
 - Balance delay of line
 - Station efficiency
- (ix) Scheduling deals with:
- Number of jobs to be done on a machine
 - Number of machine tools used to do a job
 - Different materials used in the product
 - Fixing up starting and finishing times of each operation in doing a job
- (x) The act of releasing the production documents to production department is known as:
- Routing
 - Scheduling
 - Expediting
 - Dispatching

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

I	II
1. Ranking Method	(a) Method study
2. Motion economy	(b) job evaluation
3. Work sampling	(c) Inventory Control
4. Crashing	(d) Network Analysis
5. Replacement	(e) work measurement
6. Stock Level	(f) Maintenance

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

- Training boosts employee morale ()
- No handling is the best handling ()
- Increase in productivity leads to retrenchment of work force ()
- Results available from work sampling study is not 100% accurate ()
- Break-even analysis a management tool ()
- General purpose machine are less prone to obsolescence ()

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

2. **(a)** List the scope of operations management. **[8]**
(b) What is forecasting? What are its advantages? **[8]**
3. **(a)** What does Product Design do? Discuss — Process design and selection. **[3+7=10]**
(b) A department works on 8 hours shift, 288 days a year and has the usage data of a machine, as given below:

Product	Annual Demand (units)	Processing time (standard time in hours)
A	325	5.0
B	450	4.0
C	550	6.0

- Calculate
- processing time needed in hours to produce products A, B and C,
 - Annual production capacity of one machine in standard hours, and
 - Number of machines required.
- [6]**

4. **(a)** The cost conscious company requires for the next month 300,260 and 180 tonnes of stone chips for its three constructions C1,C2 and C3 respectively. Stone chips are produced by the

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company at three mineral fields taken on short lease by the company. All the available boulders must be crushed into chips. Any excess chips over the demands are sites C1,C2 and C3 will be sold ex-fields.

The fields are M1, M2 and M3 which will yield 250,320 and 280 tones of stone chips respectively.

Transportation costs from mineral fields to construction sites vary according to distances, which are given below in monetary unit (MU)

	To	C1	C2	C3
Form	M1	8	7	6
	M2	5	4	9
	M3	7	5	5

- (i) Determine the optimal economic transportation plan for the company and the overall transportation cost in MU.
- (ii) What are the quantities to be sold form M1, M2 and M3 respectively? **[10]**

(b) The following jobs have to be shipped a week from now (weak 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. **[6]**

- 5. (a)** A project consist of five activities. Activities P and Q run simultaneously. The relationship among the various activities is as follows:

Activity	Immediate successor
P	R
Q	S

Activity T is the last operation of the project and it is also immediate successor to R and S. Draw the network of the project. **[6]**

- (b)** Indian electronics, manufactures TV sets and carries out the picture tube testing for 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) Strategic analysis is concerned with stating the position of the organization in terms of:
- Mission, choice of market segments, product selection, financial targets, external appraisal;
 - Mission, goals, corporate appraisal, position audit and gap analysis.
 - Mission goals, identification of key competitors, SWOT and environmental appraisal;
 - Mission, targeted ROI, manpower planning, position audit;
 - Mission, SWOT, competitive strategies, stakeholders position and institutional goal;
- (ii) The essential ingredients of Business Process Re- engineering are:
- Continuous improvements of products, processes and technologies.
 - Advanced planning in the areas of technologies, processes and strategic partnerships etc.

- (c) Fundamental rethinking and radical redesign of business process to achieve dramatic results.
 - (d) Generation, comparison and evolution of many ideas to find out one worthy of development.
 - (e) Identification and selection of layouts most suited for products and processes.
- (iii) 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
- (iv) Directional policy matrix is the same as
- (a) the BCG model
 - (b) the 9 – cell GE matrix
 - (c) the life cycle portfolio analysis
 - (d) the PIMS matrix
 - (e) the 3x3 competitive positioning matrix
- (v) For an entrepreneur
- (a) Vision is before the mission
 - (b) Mission is before the vision
 - (c) Both are developed simultaneously
 - (d) Vision or mission are un-important issue
 - (e) profitability is most crucial
- (vi) Typically profits are highest in which stage of the industry life-cycle?
- (a) Introduction
 - (b) Growth
 - (c) Maturity
 - (d) Decline

Answer any one question from the following:

[1x12=12]

7. (a) What do you mean by strategy? State its features. **[6]**
(b) What do you mean by Portfolio Analysis and do list down its objectives. **[6]**
8. (a) List down various types of organizational structure. **[6]**
(b) Discuss Mc Kinsey's 7-s frame work. **[6]**
9. **Write a short note on any of the following three questions:** **[4x4=16]**
(a) BPQ;
(b) Marketing Mix;
(c) Benefits on contingency planning;
(d) Corporate level management.