INTERMEDIATE EXAMINATION

June 2019

Operations Management and Strategic Management

Time Allowed: 3 Hours   Full Marks: 100

The figures in the margin on the right side indicate full marks.
This paper contains two Sections.
Both Sections are compulsory, subject to instructions provided against each.
All workings must form part of your answer.
Assumptions, if any, must be clearly indicated.

Section A

Operations Management

1. (a) Choose the correct answer: 1×10=10

    (i) Inventory cost per product in intermittent production is

        (A)   Higher

        (B)   Lowest

        (C)   Medium

        (D)   Abnormal

    (ii) The act of assessing the future and make provisions for it is known as

        (A)   Planning

        (B)   Forecasting

        (C)   Assessment

        (D)   Scheduling

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

        (A)   Material chart

        (B)   Gantt chart

        (C)   Route chart

        (D)   Inspection chart

    (iv) Cost reduction can be achieved through

        (A)   Work sampling

        (B)   Value analysis

        (C)   Quality assurance

        (D)   Supply chain management

Please Turn Over

(v) Linear Programming is a technique used for determining

(A) Production Programme

(B) Plant Layout

(C) Product Mix

(D) Manufacturing Sequence

(vi) (Total station time/cycle time × Number of work stations) × 100 is known as

(A) Line efficiency

(B) Line smoothness

(C) Balance delay of line

(D) Station efficiency

(vii) Arrangement of machines depending on sequence of operations happens in

(A) Process Layout

(B) Product Layout

(C) Hybrid Layout

(D) Group Technology Layout

(viii) Line of Best fit is another name given to

(A) Method of Least Squares

(B) Moving Average Method

(C) Semi Average Method

(D) Trend Line Method

(ix) In route sheet or operation layout, one has to show

(A) A list of materials to be used.

(B) A list of machine tools to be used.

(C) Every work center and the operation to be done at that work center.

(D) The cost of product.

(x) Computers are used in Production control in this area

(A) follow-up activity.

(B) to control labour.

(C) to disseminate information.

(D) Loading, Scheduling and Assignment works.

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

Column A		Column B	
(A)	Cost Benefit Analysis	(i)	Crashing
(B)	Network Analysis	(ii)	Product Design
(C)	Television Set	(iii)	Plant Layout
(D)	Use of Templates	(iv)	Method Study
(E)	Computer Aided Design	(v)	Project Viability Checking
(F)	Motion Economy	(vi)	Assembly Line

(c) State whether the following statements are 'True' or 'False':   1×6=6

   (i) A work stoppage generally reduces the cost of production.

   (ii) Depending on the need, the maintenance activity may be centralized or decentralized.

   (iii) Piece wage system is a substitute for proper supervision.

   (iv) Most suitable layout for continuous production is Matrix Layout.

   (v) Addition of value to raw materials through application of technology is production.

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

Answer *any three* questions from the following: 16×3=48

2. (a) List down various activities lying under Production and Operations Management function.

  (b) The present layout is shown in the figure. The manager of the department is intending to interchange the departments C and F in the present layout. The handling frequencies between the departments is given. All the departments are of the same size and configuration. The material handling cost per unit length travel between departments is same. What will be the effect of interchange of departments C and F in the layout?

                                                                                              6+10=16

A	C	E
B	D	F

From / To	A	B	C	D	E	F
A	–	0	80	150	60	10
B	–	–	90	0	90	110
C	–	–	–	40	0	5
D	–	–	–	–	160	20
E	–	–	–	–	–	60
F	–	–	–	–	–	–

Please Turn Over

3. (a) Examine the following types of Process decisions:

 (i) Job Shop Process

 (ii) Project Process

 (b) Describe the different types of Production Control. (3×2)+10=16

4. (a) A Project consists of four major jobs, for which four contractors have submitted tenders. The tender amounts, in thousands of Rupees, are given below:

Contractor	Jobs			
	A	B	C	D
1	110	98	75	95
2	85	95	115	65
3	105	135	125	98
4	95	95	75	95

Find the assignment, which minimizes the total cost of the Project. Each contractor has to be assigned one job.

 (b) A Taxi operator is planning to open a computerised ticket counter in the center of the city, staffed by one ticket agent. It is estimated that requests for tickets and information will average 18 per hour, and requests will have a Poisson distribution.

Service time is assumed to be exponentially distributed. Previous experience with similar computerised operations suggests that mean service time should average about 2·5 minutes per request.

Determine each of the following:

 (i) System utilization

 (ii) Percentage of time the server (agent) will be idle.

 (iii) The expected number of customers waiting to be served

 (iv) The average time customers will spend in the system. 8+(2×4)=16

5. (a) Table shows the time remaining (number of days until due date) and the work remaining (number of days still required to finish the 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., (i) FCFS, (ii) EDD, (iii) LS, (iv) SPT and (v) LPT.

Job	Number of days until due date	Number of days of work remaining
A	10	8
B	4	5
C	8	7
D	11	4
E	5	9

(b) An electronic device components manufacturing company carries out the 'A' components testing for 2500 hours. A sample of 100 'A' components was put through this quality test during which two components failed. If the average usage of the electronic device by the customer is 5 hours/day and if 12,000 such devices were sold, then in one year how many 'A' components were expected to fail and what is the mean time between failures for these components?   (2×5)+6=16

Section B

Strategic Management

6. Choose the correct answer: 1×6=6

  (i) Offensive strategy is a strategy

   (A) for small companies that consider offensive attacks in the market.

   (B) for those companies that search for new inventory opportunities to create competitive advantage.

   (C) for the market leader who should attack the competitor by introducing new products that make existing ones obsolete.

   (D) for those companies who are strong in the market but not leaders and might capture a market share from the leader.

  (ii) The BCG growth matrix is based on the two dimensions:

   (A) Market Size and Market Share

   (B) Market Size and Profit Margins

   (C) Market Size and Competitive Intensity

   (D) None of the above

Please Turn Over

(iii) 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 issues.

(iv) 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.

(v) Strategic analysis is concerned with stating the position of the organisation in terms of

    (A) Mission, choice of market segments, product selection, financial targets and external appraisal.

    (B) Mission, goals, corporate appraisal, position audit and gap analysis.

    (C) Mission, goals, identification of key competitors, SWOT and environmental appraisal.

    (D) Mission, targeted ROI, manpower planning and position audit.

(vi) Intensity of competition is _____ in low return industries.

    (A) low

    (B) non-existent

    (C) high

    (D) not important

Answer *any two* questions from the following: 12×2=24

7. (a) What is a Company Mission? List the guidelines for formulation of 'mission' statement.

   (b) Briefly describe the limitations of the BCG model.   8+4=12

8. (a) State the basic distinctions between Strategic Management and Strategic Planning.

   (b) State the various advantages and disadvantages of SBU structure.   6+6=12

9. Write short notes on *any three* of the following: 4×3=12

   (a) Features of Human Resources Strategy

   (b) McKinsey's 7-S Framework

   (c) Principle of BPR

   (d) Stages involved in Strategic Planning

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