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MBA (INTEGRATED)
(SEM IV) THEORY EXAMINATION 2018-19
OPERATIONS MANAGEMENT

Time: 3 Hours   *Total Marks: 70*

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. **Attempt *all* questions in brief.**   **2 x 7 = 14**
    a. Define operations management.
    b. Mention the objectives of operations management.
    c. What is job production?
    d. Mention the elements of work study.
    e. Define partial productivity.
    f. Mention the functions of production control.
    g. What is maintenance prevention?

SECTION B

2. **Attempt any *three* of the following:**   **7 x 3 = 21**
    a. Discuss the recent trends in production and operations management.
    b. "An ideally laid out plant goes a long way in reducing manufacturing cost." Elaborate the statement.
    c. An industrial engineer, deputed to conduct a time study for a job, has ,after observation, divided the job into five elements. Timings for 4 cycles of the job are as below:-

Times in Minutes					
Element	Cycle 1	Cycle 2	Cycle 3	Cycle 4	Performance Rating (%)
1	1.246	1.328	1.298	1.306	90%
2	0.972	0.895	0.798	0.919	100%
3	0.914	1.875	1.964	1.972	100%
4	2.121	2.198	2.146	2.421	110%
5	1.253	1.175	1.413	2.218	100%

    (i)   Are there any outliners in the data i.e. probable errors in reading or recording data which should not be included in the analysis?
    (ii) Compute the basic time for the job and standard time if a relaxation allowance of 12%, a contingency allowance of 3% and an incentive of 20% are applicable for the job.
    d. A firm is considering 4 alternative locations for a new plant. The production costs of the following items vary from one location to another.

Data	Locations			
	A	B	C	D
Labour cost/unit (Rs.)	0.75	1.10	0.80	0.90
Plant construction cost(Rs. in lakhs)	46	39	40	48
Materials and equipment cost/unit(Rs.)	0.43	0.60	0.40	0.55
Electricity charges/year (Rs.)	30,000	26,000	30,000	28,000
Water charges/year (Rs.)	7,000	6,000	7,000	7,000
Transportation cost/unit (Rs.)	0.02	0.10	0.10	0.05
Taxes/year (Rs.)	33,000	28,000	63,000	35,000

    Determine the most suitable location for output volume of 50,000 units per year.
    e. What is master production scheduling? Discuss the key functions of master production scheduling.

SECTION C

3. **Attempt any *one* part of the following:** 7 x 1 = 7

   (a) Explain the scope of operations management.
   (b) Describe and differentiate between the intermittent and continuous production systems.

4. **Attempt any *one* part of the following:** 7 x 1 = 7

   (a) Discuss various factors that affect the choice of a suitable plant location.
   (b) Differentiate between product and process layout? What are the conditions for which each type of layout is appropriate?

5. **Attempt any *one* part of the following:** 7 x 1 = 7

   (a) Enumerate the various steps involved in method study. List out the factors that indicate the need for method study.
   (b) Define the term productivity and state the ways to improve productivity.

6. **Attempt any *one* part of the following:** 7 x 1 = 7

   (a) Elaborate the importance of PPC in operations management.
   (b) Explain the various levels and functions of production planning.

7. **Attempt any *one* part of the following:** 7 x 1 = 7

   (a) What is maintenance management? Discuss the objectives and different types of maintenance.
   (b) Briefly explain the eight pillars of TPM.