

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	2.221	2.198	2.146	2.421	110%
5	1.253	1.175	1.413	2.218	100%

- (i) Are there any outliers 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.