

26/2061

3075/ML

204(b)-Operations Management
MBA (CC)-Part-I, Sem-II

Time: 03 hours

Max. Marks: 70

Instructions:

1. The question paper is divided into three groups, i.e., I, II, and III.
2. There are total nine questions carrying equal marks (14 Marks each).
3. Attempt any five questions in all, selecting not more than two questions from each group.

Group-I

Q1. Define strategy. What are various operations strategies to compete in the competitive world ?

Q2. What are various methods of demand forecasting ? Explain in details.

Q3. An assembly consists of the following elements:

Task	A	B	C	D	E	F	G	H	I	J	K	L
Immediate Predecessor	Nil	A	B	B	B	B	C,D	G	E	I,F	H,J	K
Task Time	12	6	6	2	2	12	7	5	1	4	6	7

The production rate required is one assembly every 15 minutes. Determine the minimum number of workstations required so as to minimize the balance-delay. Find balance-delay station wise.

Group-II

Q4. There are 5 jobs, each of which has to go through the machines A and B in the order AB. The processing times (in hours) are given as:

Job :	J1	J2	J3	J4	J5
Machine A :	2	4	5	7	1
Machine B :	3	6	1	4	8

Determine a sequence of these jobs that will minimise the total elapsed time T. Also obtain:

- i) the minimum elapsed time; and
- ii) the idle time for each of the machines.

Q5. Activity list for the Reliable Construction Co. project is given below:

Contd 2

Activity	Activity Description	Immediate Predecessors	Estimated Duration
A	Excavate	—	2 weeks
B	Lay the foundation	A	4 weeks
C	Put up the rough wall	B	10 weeks
D	Put up the roof	C	6 weeks
E	Install the exterior plumbing	C	4 weeks
F	Install the interior plumbing	E	5 weeks
G	Put up the exterior siding	D	7 weeks
H	Do the exterior painting	E, G	9 weeks
I	Do the electrical work	C	7 weeks
J	Put up the wallboard	F, I	8 weeks
K	Install the flooring	J	4 weeks
L	Do the interior painting	J	5 weeks
M	Install the exterior fixtures	H	2 weeks
N	Install the interior fixtures	K, L	6 weeks

Construct network diagram and find:

1. Critical path
2. Total, free and independent floats.

Q6. What is Johnson's sequencing rule ? Explain use of PERT in project management.

Group-III

Q7. What is statistical quality control? Explain acceptance sampling in details.

Q8. What is inventory control ? Draw a plan of ABC selective control:

Item	Units	Unit cost (Rs.)
1	7,000	5
2	24,000	3
3	1,500	10
4	600	22
5	38,000	1.5
6	40,000	0.50
7	60,000	0.20
8	3,000	3.5
9	300	8
10	29,000	0.40
11	11,500	7.10
12	4,100	6.2

Q9. What are control charts ? Explain control charts for variables and attributes in details.

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