

Seat No. : _____

XV-104

Five Years M.B.A. Integrated (K.S.)

4th M.B.A.

April-2013

Production and Operations Management

Time : 3 Hours]

[Max. Marks : 70

- Instructions :**
- (1) This is a closed book examination.
 - (2) Please start your answer to next question on a new page.
 - (3) Q 4. is compulsory.

1. Write short notes on any **two** of the following : **14**

- (a) Role of productivity in Operations Management
- (b) Errors in selecting locations
- (c) Assembly line balancing

2. (a) Discuss factors affecting process design, taking an example of internet based buying of materials. **7**

(b) Explain scheduling as a function of production planning & control with example of a production process. **7**

OR

(a) How has product lifecycle impacted growth of mobile services in India ?

(b) How is product planning linked to process planning ?

3. (a) How can value be created in manufacturing processes ? Explain with examples. **7**

(b) Are standard time practices of work study followed in today's scenario ? Discuss. **7**

OR

(a) There is a 3% error rate at a specific point in a production process. If an inspector is placed at this point, all errors can be detected and eliminated. However, inspector is paid \$ 8 per hour and can inspect units in the process at rate of 30 per hour. If defects are allowed to pass without having an inspector, there is a cost of \$ 10 per unit to correct defect later on. Should an inspector be hired ? **5**

(b) Explain total quality management with its applications ? **9**

4. (a) Following information is given about a Project with daily duration. 10

Activity	Predecessor	Normal Time	Crash Time	Normal Cost	Crash Cost
A	–	2	2	800	800
B	A	4	3	1200	1500
C	A	5	3	1200	1600
D	B	2	1	700	900
E	B	1	1	500	500
F	B, C	8	6	1000	1450
G	D, E	3	2	800	1100
H	F	5	4	900	1200
I	F	4	3	800	1150
J	G, H, I	7	6	1100	1500

- (i) Draw network diagram.
(ii) Find critical path and duration of critical path.
(iii) For the given data, crash the project by 3 weeks and show increase in cost.

- (b) What are the costs involved in material handling ? 4

5. (a) Compare between MRP I and MRP II. 4

(b) A manufacturing company in Hayward, California, makes flashing light for toys. Company operates production facility 300 days an year. It has orders for about 20,000 lights per year and has capability of producing 100 per day. Setting up light costs \$ 50 and cost of each light is \$ 1. Holding cost is \$ 0.10 per light per year.

- (i) What is optimal size of production run ?
(ii) How many production runs are needed ?
(iii) What is annual holding and annual order cost ?
(iv) If demand changes to 15,000 lights per year, how will it impact EOQ ? 10

OR

- (a) How is performance evaluation done for vendors ? 9
(b) What is importance of materials management in manufacturing sector ? 5