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Total number of printed pages – 3

MBA

MGT 204

Second Semester Regular Examination – 2015
OPERATIONS MANAGEMENT
BRANCH : MBAR
QUESTION CODE : J 369

Full Marks – 70

Time : 3 Hours

*Answer Question No. 1 which is compulsory and any **five** from the rest.*
The figures in the right-hand margin indicate marks.

1. Answer the following questions : 2×10

   (a) What is the difference between manufacturing and service operation ?

   (b) Explain the suitability of fixed position layout.

   (c) What are the different strategies of aggregate planning ?

   (d) Define critical path.

   (e) What are the inputs of MRP ?

   (f) What are the different costs involved in quality control ?

   (g) What is standard time ?

   (h) What are the different cycles of supply chain management ?

   (i) Differentiate between producer risk and consumer risk.

   (j) What is ISO 9000 ?

2. (a) Explain the importance of Production, Planning and Control (PPC). 5

   (b) Discuss the steps involved in new product development. 5

3. (a) Explain the meaning and significance of plant location. How will you decide the location of a mini steel plant in Orissa ? 5

   (b) What are the different types of plant layout ? Differentiate between process and product layout. 5

4. (a) Differentiate between P and Q system of inventory. 3

P.T.O.

(b) SRISH Tubes is the manufacturer of picture tubes for TV. The following data are details of their operations during 2013-14. Ordering cost-100/- per order, Inventory carrying cost 20% p.a., normal usage-100 tubes per week, Minimum usage-50 tubes, Maximum usage-200 tubes per week, Lead time to supply-6-8 weeks

Calculate :   7

   (i)   EOQ if the supplier is willing to supply 1500 units at a discount of 5% of worth accepting.

   (ii)   Reorder level

   (iii)   Maximum level of stock.

   (iv)   Minimum level of stock.

5.   (a)   Explain the steps involved in stop watch time study procedure.   5

   (b)   Consider the following 3 machines and 7 jobs flow shop problem. It is processed on the three machines in the sequence of M1, M2, and M3. Calculate flow time and ideal time   5

Jobs	M1	M3	M2
A	1	3	7
B	3	10	3
C	7	9	8
D	9	11	2
E	4	9	8
F	5	14	6
G	2	12	1

6.   A construction company has listed down various activities that are involved in constructing a building. Draw a project network for the above project. Find the critical path and expected project completion time.   4+4+2

Activity	Predecessors	a	m	b
A	—	4	4	10
B	—	1	2	9
C	—	2	5	14
D	A	1	4	7
E	A	1	2	3
F	A	1	5	9
G	B,C	1	2	9
H	C	4	4	4
I	D	2	2	8
J	E,G	6	7	8

(a) Calculate the expected time and variance for each activity.

(b) Draw the critical path diagram. Show the early start, early finish time and late start, late finish times.

(c) Show the critical path.

7. (a) What is TQM ? Discuss different principles associated with it. 3

(b) The following table gives the average daily production figures for 20 months each of 25 working days. Given that the population standard deviation of daily production is 35 units. Draw a control chart for the mean. 7

| 210 | 205 | 210 | 212 | 211 | 209 | 219 | 204 | 212 | 209 |
| 212 | 215 | 208 | 214 | 210 | 204 | 211 | 211 | 203 | 211 |

8. Write short notes on any **four** of the following : 2.5×4

(a) Hybrid layout

(b) Acceptance Sampling

(c) Service Package

(d) Push and Pull view of Supply chain

(e) Statistical Quality Control (SQC).

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