K 4508

M.B.A. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2007.

Second Semester

BA 1651 — PRODUCTION MANAGEMENT

(Regulation 2005)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1.   Distinguish between production management and operations management.

2.   What is SCM?

3.   What is Kanban system?

4.   What is ROL? How will you determine the ROL of a deterministic system?

5.   What is capacity planning?

6.   What is group technology?

7.   Distinguish between CPM and PERT.

8.   What is flow shop scheduling?

9.   Distinguish between CRAFT and ALDEP.

10. What is work sampling?

PART B — (5 × 16 = 80 marks)

11. (a) List and explain the types of production system with suitable example.

Or

(b) What is CIM? Explain its components.

12. (a) The store of an oil engine repair shop has 10 items whose details are shown in the following table. Apply ABC analysis to the store and find A, B and C class items.

Details of Store

Comp Code	Description	Price/Unit	Unit/Year
C 01	Packing thread	90	100
C 02	Tower Bolt	150	300
C 03	Hexagonal nut	50	700
C 04	Bush	200	400
C 05	Coupling	400	1,000
C 06	Bearings (Big)	2,000	30
C 07	Bearing (Small)	900	100
C 08	Fuel Pump	6,000	500
C 09	Fixture	4,000	105
C 10	Drill bit	90	1,000

Or

(b) Consider an item that has projected requirements as shown in table. The beginning inventory of 30 units. The Economic Order Quantity is 65 units and the lead time to assemble the item is one week. Develop the MRP table for the item.

Projected Requirements

Week	0	1	2	3	4	5	6	7	8	9	10	11	12
Projected Requirement	–	30	50	40	–	15	20	20	–	10	–	15	50

13. (a) What is aggregate planning? What are the methods of aggregate planning? Briefly explain them.

Or

(b) The sales particular of a company for 13 years of operation is furnished below.

Year	1	2	3	4	5	6	7
Units Sold	96	116	119	127	146	145	153

Year	8	9	10	11	12	13
Units Sold	158	160	165	177	190	205

(i) Fit a simple regression for the above data.

(ii) Forecast the sales for the 14th year of operation.

14. (a) The activities involved in Alpha Garment Manufacturing Company are listed below with their time estimates. Draw the network for the given activities and carry out the critical path calculations and find the critical path and project completion time.

Activity	Description	Immediate Predecessor (s)	Duration (Days)
A	Forecast sales volume	–	10
B	Study competitive market	–	7
C	Design item and facilities	A	5
D	Prepare production plan	C	3
E	Estimate cost of production	D	2
F	Set Sales price	B,E.	1
G	Prepare budget	F	14

Or

(b) Illustrate resource levelling technique with a suitable example.

15. (a) List and explain different types of layout. Also, discuss their merits and demerits.

Or

(b) (i) What is line balancing?

(ii) Illustrate the process of designing workstations using Rank Positional Weight method.

(iii) Compute the corresponding balancing efficiency.