ANNA UNIVERSITY CHENNAI 600 025 Roll No_____

B.E. Degree Examination (Full Time)

PRINTING TECHNOLOGY

PT 9402 Scheduling and Planning for Print Production Semester:

Max. Marks: 100 **Total Time: 3 Hours**

PART A

(10 X 2 = 20 marks)

Answer **ALL** Questions

All questions carry equal marks

1. What do you mean by Scheduling Problems ?
2. Explain "Critical Activity" with respect to networking problems
3. What are the types of inventories in an e publishing company?
4. List out the various types of inventory problems in Printing.
5. What do you mean by Lead Time in a Printing Ink Company?
6. Where can Bill of Materials be used in a Packaging Organization?
7. Briefly explain the techniques for sequencing.
8. Define ERP with an example.
9. Define EOQ with an example from the Printing Industry.
10. Draw the organization structure of a typical offset printing unit

PART B

(5 X 16 = 80 marks)

Answer **ALL** Questions

All questions carry equal marks

11. A project has the following activities

Activity	Immediate Predecessor	Time(days)
A	------	6
B	------	9
C	B	1
D	C	9
E	C	1
F	D	5
G	F	1
H	D	1
I	D	2
J	I	10

(i) Draw network diagram **(10)**

(ii) Compute ES,EF,LS,LF **(3)**

(iii) Determine the critical path **(2)**

(iv) Calculate the project completion time. **(1)**

12. (a). Solve the following transportation problem for total cost & total profit using VAM.

	1	2	3	4
A	33	32	57	77
B	44	56	86	76
C	59	95	91	92
D	85	69	68	41

Demand at markets 1,2,3 and 4 are 200,150,250 and 200 units respectively. The supply from factories A,B,C and D are 150,250,450 and 450 respectively

(OR)

(b) Explain in detail the factors involved in layout and plot selection for setting up a large scale Printing Machinery Manufacturing Organization

13 (a) Explain in detail the various forms used in production by a packaging company with appropriate diagrams.

(OR)

(b)

Job\Dept.	A (Hrs.)	B	C	D
1	8	3	4	7
2	9	2	5	5
3	6	4	5	8
4	12	5	1	9
5	7	1	2	3
6	8	3	3	7
7	12	5	2	9
8	6	3	4	7
9	10	3	2	8
10	9	5	4	9

(i) Find the ideal sequence **(4)**

(ii) Total time for the ideal sequence if order of processing is ABCD. **(6)**

(iii) Also find the idle time for the different departments. **(2)**

(iv) Final item Z is assembled from 3 major assemblies A, B and C. A consists of 3 units of D, 25 units of E and one of F. To make B component G and 31 units of H are needed. Subassembly C Requires 28 units of J, 21 units of H and 38 units of F. Component D requires 47 units of J and one unit of K. Construct a product structure tree for Z and Prepare a comprehensive BOM for producing 15000 units of Z. **(4)**

14 (a)(i) Explain with flowcharts MRP & MPS for a large newspaper organization **(8)**

(ii). Solve using Gantt Chart Technique: **(8)**

Job\Dept.	D1 (Hrs.)	D2
J1	8	5
J2	5	9
J3	9	6

(OR)

(b) .Solve using HAM for Minimization and Maximization

	A	B	C	D	E
1	41	44	60	88	44
2	15	62	89	70	80
3	28	89	42	42	42
4	90	58	51	25	25
5	65	44	41	41	31
6	25	24	82	78	48

15 (a) Explain in detail with sketches the floor plan of the various department of a typical large scale newspaper organisation.

(OR)

(b) Write short note on

(i) CRP **(4)**

(ii) Inventory models **(4)**

(iii) For an item the annual demand is known to be 80000 units which is uniformly distributed over the year. The unit cost of the item is Rs.19945/- and the holding cost is 4%of the inventory value. It costs 5000 rupees to place an order for this product. Determine: (a)The EOQ(b) The change in EOQ if ordering cost changes to Rs.4430/- (c) The change in EOQ if holding cost becomes 8% of the item value. **(8)**