

19/11/15

**ANNA UNIVERSITY CHENNAI 600 025 Roll No \_\_\_\_\_**  
**B.E. Degree Examination (Full Time) VII Semester**  
**PRINTING TECHNOLOGY**  
**PT9402 Scheduling and Planning for Print Production**

**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 Transportation Problems in the Printing Industry?
2. Explain "Float" with respect to networking problems
3. What are the types of inventories in a printing organization?
4. List out the various types of Inventory problems in a Prepress unit.
5. What do you mean by Reorder Time?
6. Where can Bill of Materials be used in a printing ink manufacturing company?
7. Draw a diagram showing the layout of an offset machine indicating its footprint.
8. Define MRP with an example.
9. Define Safety stock with an example from the packaging Industry.
10. Draw the organization structure of a typical printing press.

**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	-----	5
D	C	11
E	B	4
F	D	10
G	F	2
H	D	5
I	D	18
J	I	1

- (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	97
B	54	66	96	96
C	59	65	81	92
D	55	99	88	74

Demand at markets 1,2,3 and 4 are 300,450,250 and 200 units respectively. The supply from factories A,B,C and D are 450,225,200 and 350 respectively

(OR)

(b) Explain in detail with diagrams and flowcharts the various functions of the production control department in a printing press

13 (a) Explain in detail with examples the factors involved in scheduling and sequencing jobs in a printing and packaging company.

(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	10	2	1	9
5	7	1	2	3
6	8	3	3	7
7	12	2	2	8
8	6	3	3	7
9	10	3	2	8
10	9	2	4	9

(i) Find the ideal sequence and represent it in the form of a Gantt chart (9)

(ii) Total time for the ideal sequence if order of processing is ABCD. (5)

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

14 (a) (i) Explain in detail with flowcharts the ERP system for a large newspaper organization (16)

(OR)

(b) .Solve using HAM for Minimization and Maximization

	A	B	C	D	E
1	80	54	60	88	54
2	35	62	99	70	80
3	28	89	42	22	42
4	90	58	32	25	25
5	65	54	81	81	38
6	25	24	82	78	98

15 (a) Explain in detail with sketches the various aspects of inventory management for a large scale printing machinery manufacturing company .

(OR)

(b) Write short notes on

(i) Work Instruction ticket

(4)

(ii) Material release and cutting slip in a press

(4)

(iii) For an item the annual demand is known to be 10000 units which is uniformly distributed over the year. The unit cost of the item is Rs.9999/- and the holding cost is 15% of the inventory value. It costs 2000 rupees to place an order for this product. Determine: (a) The EOQ (b) The change in EOQ if ordering cost changes to Rs.2430/- (c) The change in EOQ if holding cost becomes 10% of the item value.

(8)