

- Q1. Discuss the various types of forecasting and its components.  
 Q2. Discuss the various functions of PPC.  
 Q3. Explain the process of PPC with the help of block diagram.  
 Q4. What are the decisions involved in PPC? What are the information requirements for these decisions.  
 Q5. Elaborate briefly your understanding about Just-In-Time manufacturing.  
 Q6. Briefly highlight various techniques of sales forecasting.  
 Q7. Write Short Notes over the following.

(i) Gantt chart.      ii) Aggregate planning.      iii) Master production schedule

- Q8. Discuss the various methods for line & intermittent production system in scheduling operation.

- Q9. Data collected on the yearly demand for special types of Electronic component are shown below:

Year :	1	2	3	4	5	6	7
Demand	100	80	90	150	225	310	300

In Thousands

- (i) Find out the demand for 8<sup>th</sup> year by weighted moving Avg. method Consider weight 0.5, 0.3 & 0.2.  
 (ii) Find the demand for 8<sup>th</sup> year by simple MA method.  
 (iii) Find the demand for 8<sup>th</sup> year & 9<sup>th</sup> year with  $N = 3$  & 5  
 (iv) Using a weighted moving Avg. with  $N = 3$  and weights of  $3/6$ ,  $2/6$  and  $1/6$ . Compute the forecasts that would have occurred during the past 5 years.  
 (v) In (iv) for 8<sup>th</sup> year.

- Q10. The data of monthly demand for 9 months are as follows :

Period:	1	2	3	4	5	6	7	8	9
Demand :	110	102	108	121	112	105	114	106	115

In Thousands

Forecast the demand for period 10 by three period weighted moving average method. Assume weights = 0.5, 0.3 & 0.2 respectively.

- Q11. The machine shop has six jobs awaiting Processing. Their estimated processing time for three-stage process are given below:

Job:	1	2	3	4	5	6
Stage 1 :	6	10	8	11	9	7
Stage2:	5	4	3	6	6	3
Stage3:	9	7	5	4	3	3

All times for stages are in minute. The company wants to minimize the MAKESPAN Time. Determine the sequence of job and make span time.

- Q12. A ready made-garments manufacturer has to process five items through two stages of production viz. cutting and sewing (M/CA & M/CB). The time taken for each of these items at the different stages is given below in appropriate units.

Item		1	2	3	4	5
Processing time (hours)	{ Cutting	5	7	3	4	5
	{ Sewing	2	6	7	5	9

Find an order in which these items should be processed through these stages so as to minimize the total processing time.

- Q13. A machine shop has five machines A, B, C, D & E. Two jobs must be processed through each of these machines. The time (in house) taken on each of these machines and the necessary sequence of jobs through the shop are given below.

Job 1	{	Sequence	A	B	C	D	E
		Time	2	4	3	6	6
Job 2	{	Sequence	C	A	D	E	B
		Time	4	6	3	3	6

Use graphical method to obtain the total minimum elapsed time.

- Q14. Combined Question No. 11 & 12 for 6 jobs & 5 MC then find the total elapsed time and sequence of job.