CLASS: BE   SEMESTER : VI/ADD
BRANCH: PRODUCTION   SESSION : SP/19

SUBJECT: PE6005 PRODUCTION PLANNING AND CONTROL

TIME: 3.00 Hrs.   FULL MARKS: 60

INSTRUCTIONS:
1. The question paper contains 7 questions each of 12 marks and total 84 marks.
2. Candidates may attempt any 5 questions maximum of 60 marks.
3. The missing data, if any, may be assumed suitably.
4. Before attempting the question paper, be sure that you have got the correct question paper.
5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.

Q.1(a)	Mention any four objectives of production management.	[2]
Q.1(b)	Which approach to management holds that managers Plan, Organize, direct and control.	[4]
Q.1(c)	Explain briefly mass and batch production with its characteristics, advantages and limitations?	[6]
Q.2(a)	Define forecast and explain the characteristics which are common to all forecasts.	[2]
Q.2(b)	What are the pure planning strategies in aggregate production planning? Why are both used in combination with each other?	[4]
Q.2(c)	A company manufacturing TV sets find that there exists a relationship between the population and sale of TV sets in the city. The following data has been collected:	[6]

Population (in lakh)	15	23	25	36	42
TV demand	65	80	96	130	185

Fit a linear regression equation and estimate the demand for TVs for a city with population of 60 lakhs

Q.3(a)	What are the main decision areas of job-shop scheduling?	[2]
Q.3(b)	What are the Gantt Charts? How are they used in scheduling? What advantages & limitations are associated with Gantt Charts?	[4]
Q.3(c)	There are five jobs (I,II…V) which require to be processed on three machines (A,B and C) in the order ABC that is through machine A first then through machine B and lastly through machine C. The processing times of these jobs on each of three machines are given below:	[6]

Job	Processing times (hrs)		
	A	B	C
I	12	11	13
II	15	12	14
III	13	9	12
IV	12	10	15
V	14	9	10

Determine the sequence for the five jobs to minimize total elapsed time.

Q.4(a)	Define inventory & why inventory management is important?	[2]
Q.4(b)	Briefly describe each of the priority rules: a) FCFS b) SPT c) LCFS d) Rush	[4]
Q.4(c)	A stockiest has to supply 400 units of a product every Monday to his customers. He gets the product at Rs. 50 per unit from the manufacturer. The cost of ordering and transportation from the manufacturer is Rs. 75 per order. The cost of carrying inventory is 7.5% per year of the cost of the product. Find (i) the economic lot size (ii) the total optimal cost (iii) the total weekly profit if the item is sold for Rs. 55 per unit.	[6]
Q.5(a)	Explain the technique "Always better Control".	[2]
Q.5(b)	What are the activities, duties & functions of purchasing department?	[4]
Q.5(c)	The success of the business, besides other factors, depends to a large extent on the efficient storage & material control. Justify.	[6]
Q.6(a)	Explain facility design process.	[2]
Q.6(b)	Discuss the importance of location theories and models. How do these theories help in plant location and design?	[4]
Q.6(c)	"The location choice problem is complex mainly because multiple objectives and criteria are normally evident". Discuss illustrate.	[6]
Q.7(a)	What are the objectives of plant maintenance?	[2]
Q.7(b)	Name different types of maintenance used in industry. Give merits and demerits of each.	[4]
Q.7(c)	What are the differences between a breakdown maintenance and preventive maintenance?	[6]