Time: 3 hours   Full Marks: 70

Use separate answer script for each half

Answer SIX question, taking THREE from each half,

The questions are equal value

FIRST HALF

1 a) Define management . List its functions as per Mintzber .What is meant by the "Management process".

b) What are the feature of management. Explain each element briefly. State the system approach to management.

2 a) Discuss the importance of planning. Write characteristic of a good planning.

b) What do you mean by management by objectives(MBO). Discuss and write the steps of planning.

3 a) Describe the Systematic procedure of work study. Explaining all steps. Enlist the various recording techniques used in method study.

b) Give the various symbols utilized as recording techniques   with their meaning. Prepare operation process chart for making a cast iron gear.

4 a) What do you understand by the term "Rating " in Time study. What are the various method used in rating.

b)The time study on a job has the following data ,observed time 0.5 minute, rating 125%,allowances 15% of S.T. Determine basic time and standard time.

5) Write short Note (Any three)

(a) Formal and Informal Organization.

(b) Principles of organization

(c) Types of Planning

(d) Planning is essentially forward looking - Explain

(e) Management and Administration.

SECOND HALF

Use separate answerscript for each half.

Answer any three questions

The questions are of equal value.

6. There are three potential sites and five relevant factors like transportation costs per week, labour costs per week, finishing material supply, maintenance facilities and community attitude. The costs are in rupees whereas for last three factors, points are assigned on 0 – 100 scale. The data are given below:

Potential Sites

Factors		S1	S2	S3
Transportation cost/ week	F1	800	640	500
Labour cost/ week	F2	1180	1020	1240
Finishing Material supply	F3	30	80	70
Maintenance Facilities	F4	60	20	30
Community Attitude	F5	50	80	70

The location analyst has pre – established weights for various factors. This includes a standard of 1.0 for each Rs 10 a week of economic advantage. Other weights applicable are 2.0 on finishing material supply, 0.5 on maintenance facilities and 2.5 on community attitude. Also the organization prescribes a minimum acceptable score of 30 for maintenance facilities. Select a suitable site based on the above given data.

7. Write short notes on:
    i)   Fixed Position Layout
    ii)   Combination Layout

8. (a) What is ABC Inventory Control system?

    (b) The rate of use of a particular raw material from stores is 20 units per year. The cost of placing and receiving an order is Rs 40. The cost of each unit is 100. The cost of carrying inventory in percent per year is 0.16 and depends upon the average stock. Determine the economic order quantity. If the lead time is 3 months, calculate reorder point.

9. (a) Name 7 Quality control tools.

    (b) In a glass factory thickness of glass is measured in mm by taking 5 samples from a lot of 100 and 6 lots are checked. The observations are as follows. Draw X Bar R chart and interprete the results. A2 = 0.577, D3=0 and D4= 2.114

Lot		1	2	3	4	5	6
Sample No. 1		7	6	8	5	4	2
Do	2	8	5	7	4	6	3
Do	3	5	4	5	3	2	1
Do	4	4	3	2	3	1	5
Do	5	6	1	4	2	5	6

10.(a) Discuss the term Reliability.

    (b) Following is the data available on the failures of 10 identical special purpose bulbs being used at a plant.

Time in month	Failure Probability
1	Nil
2	Nil
3	Nil
4	0.05
5	0.15
6	0.30
7	0.25
8	0.15
9	0.10

The cost of replacing bulbs individually, when they fail is Rs 100 (per bulb). The cost of replacing all the 10 bulbs together is Rs 500.

Compute the cost of group break down replacement i.e as soon as one bulb fails, all ten bulbs are replaced.