QUESTION 2013

Group – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for any ten of the following:

i) Process layout is also called

a) Straight-line layout
✓b) Functional layout
c) layout for serialized manufacture
d) none of these

ii) Low product variety and high production volume are characteristics of

a) Job shop production
✓b) Mass production
c) Batch production
d) none of these

iii) Ship building industry will be best fitted for

a) Process layout
b) Product layout
✓c) Fixed position layout
d) none of these

iv) Production planning and control is difficult for

a) Mass production
b) Batch production
✓c) Jobbing works
d) none of these

v) Mass production system is adopted when

✓a) volume is large and variety is less

b) volume is small and variety is large

c) both volume and variety are medium

d) none of these

vi) ○ symbol in method study represents

a) inspection ✓b) operations c) transportation d) storage

vii) Mass production system is adopted when

✓a) volume is very large and variety is less

b) volume is small and variety is large

c) both volume and variety are large

d) none of these

viii) For an integrated steel plant, the plant location decision will be chiefly influenced by the consideration of

a) proximity of the market

✓b) proximity to the raw material supply source

c) availability of good transportation

d) all of these

ix) Production planning and control is difficult for ..... production system.

a) Mass b) Batch c) both (a) and (b) ✓d) none of these

x) IS 9001 is a system for

✓a) Quality Management

b) Operational Planning

c) Productivity Improvement

d) Preventive Maintenance

xi) Statistical quality control is done to

a) prevent any defective product from going out of the factory

b) observe the trend of product quality

✓c) initiate corrective action if quality trend shows an adverse pattern

d) none of these

Group – B

(Short Answer Type Questions)

2. Distinguish between product layout and process layout.

See Topic: PLANT LOCATION AND LAYOUT, Short Answer Type Question No. 1.

3. Discuss the significance of statistical quality control.

See Topic: INSPECTION AND QUALITY CONTROL, Short Answer Type Question No. 1.

4. A new medical facility, Health-are, is to be located in Delhi. The location factors, factor rating and scores for two potential sites are shown in the following table. Which is the best location based on factor rating method?

Serial No.	Location factor	Factor rating	Rating	
			Location 1	Location 2
1.	Facility utilization	8	3	5
2.	Total patient per month	5	4	3
3.	Average time per emergency trip	6	4	5
4.	Land and construction costs	3	1	2
5.	Employee preferences	5	5	3

See Topic: PLANT LOCATION AND LAYOUT, Short Answer Type Question No. 4.

5. Distinguish between preventive maintenance and predictive maintenance.

See Topic: PLANT MAINTENANCE AND MATERIALS HANDLING, Short Answer Type Question No. 7.

6. Describe five material handling equipment used in a manufacturing concern.

See Topic: PLANT MAINTENANCE AND MATERIALS HANDLING, Short Answer Type Question No. 8.

Group – C
(Long Answer Type Questions)

7. a) What is the relationship between Observed time, Normal time and Standard time?

b) Define Work Measurement.

c) Calculate the standard production per shift of 8 hours duration, the Observed time/unit = 5 minutes, Rating factor = 120% and Total allowances = 40% of Normal time.

a) See Topic: WORK STUDY, Short Answer Type Question No. 1.

b) See Topic: WORK STUDY, Short Answer Type Question No. 2.

c) See Topic: WORK STUDY, Long Answer Type Question No. 10.

8. a) Compare product layout with process layout.

b) The workmen in an engineering firm are expected to work for 400 minutes in a shift of 8 hours. The remaining time is meant for rest and personal needs.

i) Determine the standard time per piece of a job whose normal time is 2 min.

ii) Calculate the number of pieces to be produced per day.

iii) If the workmen engaged on the above job produces 180 pieces in a shift, calculate their efficiency.

c) State the advantages of work sampling over time study.

a) See Topic: PLANT LOCATION AND LAYOUT, Short Answer Type Question No. 5.

b) & c) See Topic: WORK STUDY, Long Answer Type Question No. 11.

9. a) What do you mean by Production Planning and Control (PPC)? State its main objectives.

b) A random sample of 50 switch boards used in electrical assemblies is taken for inspection each day. After inspection, the number rejected from each sample for 10 consecutive days is given below:

Days	1	2	3	4	5	6	7	8	9	10
No. of samples rejected	4	3	2	6	3	1	3	2	9	5

Construct a p-chart and comment on the data collected.

c) State the principle of X-bar chart and its use in statistical quality control.

a) See Topic: PRODUCTION PLANNING AND CONTROL, Short Answer Type Question No. 3.

b) See Topic: INSPECTION AND QUALITY CONTROL, Long Answer Type Question No. 5.

c) See Topic: INSPECTION AND QUALITY CONTROL, Long Answer Type Question No. 4(b).

10. a) Explain in brief the principles of 'Materials Handling System'.

b) What is meant by Work Study? State its advantages. Calculate standard time of a job which the following data are available: Average time of machine elements = 4 minutes, Average time for manual elements = 2.5 minutes, Performance rating = 80%, Allowances =15%.

a) See Topic: PLANT MAINTENANCE AND MATERIALS HANDLING, Short Answer Type Question No. 9.

b) See Topic: WORK STUDY, Long Answer Type Question No. 12.

11. Write short notes any three of the following:

a) OC-curve

b) Integrated Materials Management

c) Kaizen Philosophy

d) Total Quality Management

e) Motion Study

a) See Topic: INSPECTION AND QUALITY CONTROL, Long Answer Type Question No. 7(f).

b) See Topic: PLANT MAINTENANCE AND MATERIALS HANDLING, Long Answer Type Question No. 9.

c) See Topic: INSPECTION AND QUALITY CONTROL, Long Answer Type Question No. 7(a).

d) See Topic: INSPECTION AND QUALITY CONTROL, Long Answer Type Question No. 8.

e) See Topic: WORK STUDY, Long Answer Type Question No. 15(b).