

April 2014

Time – Three hours  
(Maximum Marks: 75)

[N.B: (1) Answer any fifteen questions in PART - A and division (A) or division (B) of each question in PART - B.

(2) Each question carries 1 (one) mark in PART - A and 12 (twelve) marks in PART - B.]

PART - A

1. What is meant by plant layout?
2. State any two principles of material handling.
3. Define accident proneness.
4. Define mediation.
5. Define productivity.
6. State any two objectives of method study.
7. Define rating factor.
8. What is meant by policy allowance?
9. State any two principles of product planning.
10. Define the term quality.
11. What is meant by method of variables?
12. State the benefits of ISO certification.
13. Define management.
14. Define motivation.
15. State the importance of job evaluation.
16. Distinguish between wage and salary.
17. What is meant by debenture?
18. Define the term factory overhead.
19. State any two objectives of good stock control system.
20. Define minimum stock.

[Turn over.....

PART - B

- |   | Marks |
|---|-------|
| 21. (A) Briefly explain the various techniques to improve plant layout.   | 12    |
| <i>(Or)</i>   |       |
| (B) Write down the main provisions of Indian factories act 1948 regarding health and welfare of workers.  | 12    |
| 22. (A) Discuss the basic procedure for conduct of method study.  | 12    |
| <i>(Or)</i>   |       |
| (B) Write short notes on the following:   |       |
| (i) Ratio delay study   | 6     |
| (ii) Analytical estimating.   | 6     |
| 23. (A) Briefly explain the various methods of sales forecasting.   | 12    |
| <i>(Or)</i>   |       |
| (B) What are the different types of inspection? Briefly explain any two with its merits and demerits.   | 12    |
| 24. (A) State and explain F.W.Taylor's principles of scientific management.   | 12    |
| <i>(Or)</i>   |       |
| (B) Write short notes on the following:   |       |
| (i) Line and staff organisation   | 6     |
| (ii) Zero defect concept.   | 6     |
| 25. (A) Explain the various resources of capital.   | 12    |
| <i>(Or)</i>   |       |
| (B) (i) Write down the causes of depreciation.  | 6     |
| (ii) The annual demand for an item is 4000 units. The inventory carry cost is 10%. Cost per unit is ₹.30. The ordering cost per order is ₹.60. Calculate EOQ. | 6     |

October 2014

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080

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[N.B: (1) Answer any fifteen questions in PART - A and division (A) or division (B) of each question in PART - B.

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PART – A

1. What is a plant?
2. What is meant by break-down maintenance?
3. List any two methods of settling industrial dispute.
4. State the direct cost of accidents.
5. Define productivity.
6. State any two objectives of method study.
7. Define the term rating factor.
8. What is PMTS?
9. What is forecasting?
10. What is EBQ?
11. What is meant by statistical quality control?
12. Name any four types of control charts.
13. Write any four functions of a manager.
14. Define motivation.
15. What is job-evaluation?
16. State the components of wages.
17. What is fixed capital?
18. Define depreciation.
19. Write any four types of debentures.
20. Define the term safety stock.

[Turn over.....

PART - B

21. (A) Explain the various factors that are to be considered for the selection of site for a plant.

(Or)

- (B) State the important provisions of factories act 1948, governing safety and health of workers.

22. (A) Write down the basic procedure for conducting method study.

(Or)

- (B) Explain briefly the following: (i) Production study (ii) Analytical estimation.

23. (A) Explain the major functions of production planning and control.

(Or)

- (B) Write short notes on the following: (i) Single sampling plan (ii) Centralised inspection.

24. (A) State the principles of management as enumerated by Henry Fayol. Explain any six of them.

(Or)

- (B) Explain the different types of training given to the workers.

25. (A) Discuss the various resources of capital.

(Or)

- (B) Explain ABC analysis with a graph. State its advantages.

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April 2015

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PART - A

1. What is meant by product layout?
2. What are the techniques used to improve plant layout?
3. What are the types of maintenance?
4. Give any two causes of accident proneness.
5. Draw the process chart symbol for storage.
6. What is the main purpose of work study?
7. What is basic time?
8. What rating scale is universally adopted?
9. Name the two attribute charts.
10. What is sampling inspection?
11. What is CPM?
12. What is process planning?
13. Who first developed scientific management concept?
14. What is job evaluation?
15. Write the name of basic methods of wage payment.
16. Define zero defect concept.
17. What is meant by the term finance?
18. What is factory overhead?
19. Give the formula for depreciation in sinking fund method.
20. What is a bin card?

[Turn over.....

PART - B

21. (A) (i) Explain any three factors that are to be considered for the selection of a site for a plant. (6)  
(ii) Describe any one material handling equipment with neat sketch. (6)

(Or)

- (B) What is an industrial dispute? Discuss the causes of industrial dispute. (12)

22. (A) Explain the various means by which productivity can be increased. (12)

(Or)

- (B) What is man machine chart? Explain with an example. (12)

23. (A) Write short notes on the following:

- (i) Trend line estimate. (6)  
(ii) Single sampling plan. (6)

(Or)

- (B) Write short notes on the following:

- (i) OC curve for a sampling plan. (6)  
(ii) Benefits of ISO to the organization. (6)

24. (A) Explain line and staff organisation with the help of an organisation chart. State its merits and demerits. (12)

(Or)

- (B) (i) Enlist the responsibilities of human resource manager. (8)  
(ii) Explain the payment of wages by piece rate system. (4)

25. (A) (i) What is preference share? Explain the different kinds of preference shares. (6)  
(ii) Give examples of inventory carrying cost and ordering cost. (6)

(Or)

- (B) (i) Explain how total cost of inventory can be efficiently controlled by ABC analysis technique. (8)  
(ii) State the objectives of a good stock control system. (4)

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October 2015

*Time – Three hours  
(Maximum Marks: 75)*

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PART – A

1. What are the types of plant layout?
2. What is the use of lift trucks?
3. What is mediation?
4. Write any one major factor that causes industrial dispute.
5. Define productivity.
6. Draw the process chart symbol for transportation.
7. What is repetitive element?
8. Expand PMTS.
9. Write the formula for EBQ.
10. What is routing?
11. Define inspection.
12. What are the two attributes charts?
13. What is meant by authority?
14. Define JIT.
15. State the purpose of MIS.
16. What is merit rating?
17. What is debenture?
18. What is direct cost?
19. What is the formula for depreciation in straight line method?
20. What do you understand by supply chain management?

[Turn over.....



PART - B

21. (A) (i) What are the scientific principles adopted in designing plant layout? Briefly explain.  
(ii) State the objectives of a good layout.

(Or)

- (B) Safety can be ensured by control of man performance, machine performance and physical environment. Explain with any two examples.

22. (A) Explain briefly each step the basic procedure followed for conducting method study.

(Or)

- (B) Explain 'fly back timing' and "continuous timing" as applied to stop watch time study. Compare them and state which is preferable.

23. (A) (i) What are the different types of production? Explain any one of them.  
(ii) Explain EBQ with graph.

(Or)

- (B) Explain the step by step procedure of constructing  $\bar{X}$  and R charts.

24. (A) Explain Taylor's pure functional organisation with organisation chart. State its merits and demerits.

(Or)

- (B) (i) Describe the various factors affecting wage structure.  
(ii) Describe Rowan's plan of payment by result.

25. (A) Write short notes on: (i) Factory over head (ii) Bin cards.

(Or)

- (B) Describe with a sketch about procurement and consumption cycle.



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April 2016

Time - Three hours  
(Maximum Marks: 75)

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PART - A

1. State any two principles of a good layout.
2. Mention the important techniques to improve layout.
3. Define accident.
4. Define mediation.
5. Define standard of living.
6. State any two objectives of method study.
7. What is meant by time allowances?
8. Mention the various techniques of work measurement.
9. Define scheduling.
10. State any two objectives of quality control.
11. What are the types of measurements?
12. What is meant by producer's risk?
13. State the different styles of leadership.
14. Define quality circle.
15. State the objectives of merit rating.
16. Define basic pay.
17. What is meant by preference shares?
18. Define depreciation.
19. Define reorder level.
20. What is meant by supply chain management?

[Turn over.....

PART - B

- |   | Marks |
|---|-------|
| 21. (A) What are the different types of plant maintenance?<br>Briefly explain any two.  | 12    |
| (Or)  |       |
| (B) Discuss the causes and cost of an accident.   | 12    |
| 22. (A) With a neat sketch, explain two handed process chart.                           | 12    |
| (Or)  |       |
| (B) Write down the basic procedure in making stop watch time study.                     | 12    |
| 23. (A) Briefly explain the various types of production.                                | 12    |
| (Or)  |       |
| (B) Write short notes on the following:   |       |
| (i) Economic batch quantity   | 6     |
| (ii) Double sampling plan.  | 6     |
| 24. (A) Briefly explain the functions of a manager.                                     | 12    |
| (Or)  |       |
| (B) Write short notes on the following:   |       |
| (i) On the job training   | 6     |
| (ii) Rowan's plan of wage payment.  | 6     |
| 25. (A) With a block diagram, explain how the selling price of a product is determined. | 12    |
| (Or)  |       |
| (B) Explain ABC analysis of inventory for effective stock control.                      | 12    |

**821**

**October 2016**

*Time - Three hours*  
*(Maximum Marks: 75)*

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*(2) Each question carries 1 (one) mark in PART - A and 12 (twelve) marks in PART - B.)*

PART - A

1. Give any two examples for variable path material handling equipments.
2. Name any two personal protective device used in factories.
3. Mention the types of layout.
4. What is meant by accident proneness?
5. What are the two phases of work study?
6. Draw the symbol for operation cum transportation in process charts.
7. Name the types of allowances.
8. What is basic time?
9. Write the major functions of PPC.
10. Write any two differences between inspection and quality control.
11. Write any two main duties of purchasing department.
12. What is meant by make or buy decision?
13. Write any two limitations of scientific management.
14. What are the elements of communication?
15. What is meant by positive motivation?
16. Write the 5S's.
17. What are the sources of finance for fixed capital?
18. What is meant by redeemable debentures?
19. Write the formula to find out EOQ.
20. What is meant by material management?



PART - B

- |   | Marks |
|---|-------|
| 21. (A) (i) Explain the causes of industrial accident.<br>(ii) Explain the templates technique of improving the plant layout. | 8+4   |
| (Or)  |       |
| (B) Explain the various methods of settlement of industrial disputes.   | 12    |
| 22. (A) Explain two handed process chart with an example.   | 12    |
| (Or)  |       |
| (B) (i) How are elements classified? Explain with example.<br>(ii) What are the objectives of work study?                     | 6+6   |
| 23. (A) (i) Explain the procedure of critical path method.<br>(ii) Compare centralized inspection with floor inspection.      | 6+6   |
| (Or)  |       |
| (B) (i) Explain single sampling plan with line diagram.<br>(ii) What are the benefits of having ISO-9000 certificate?         | 6+6   |
| 24. (A) (i) What are the responsibilities of human resource management?<br>(ii) Explain the factors affecting wage structure. | 6+6   |
| (Or)  |       |
| (B) Write short notes on the following:<br>(i) Rowan's plan (ii) Just in time.  | 12    |
| 25. (A) (i) Write short notes on preference share.<br>(ii) Explain the supply chain of a manufacturing firm.                  | 6+6   |
| (Or)  |       |
| (B) Explain the ABC analysis of inventory with graph.   | 12    |

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April 2017

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*(Maximum Marks: 75)*

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PART - A

1. Name the techniques used to improve layout.
2. State any two causes of machine breakdown.
3. What is meant by plant engineering?
4. Name the laws which are connected to working condition.
5. What are the basic needs of human beings?
6. Draw the symbol used for representing inspection cum operation in process charts.
7. What is meant by contingency allowance?
8. Define ergonomics.
9. What is meant by economic batch quantity?
10. What are the types of scheduling?
11. What are the types of inspection?
12. What is meant by sample?
13. Write any two limitations of traditional management.
14. What are the types of leadership?
15. What is meant by negative motivation?
16. Write the formula to calculate earnings of the worker by Halsey's 50% plan.
17. What are the types of capital?
18. What is direct material cost?
19. What is the main aim of inventory control system?

[Turn over....

20. What is meant by factory overhead?

PART – B

- |     |     |  |              |
|-----|-----|--|--------------|
| 21. | (A) | (i) Explain process layout with line diagram.<br>(ii) Explain the causes of industrial disputes.   | Marks<br>6+6 |
|     |     | (Or)   |              |
|     | (B) | (i) Explain the various personal protective devices used in industries with sketch.<br>(ii) Compare breakdown maintenance with preventive maintenance. | 8+4          |
| 22. | (A) | What are the various methods by which productivity can be increased? Briefly explain each.   | 12           |
|     |     | (Or)   |              |
|     | (B) | (i) Explain man-machine chart with an example.<br>(ii) What are the differences between flyback and continuous method?                                 | 8+4          |
| 23. | (A) | (i) Write short notes on trend line estimate.<br>(ii) What are the different types of production? Explain any one.                                     | 6+6          |
|     |     | (Or)   |              |
|     | (B) | Explain the construction of $\bar{X}$ and R-chart.   | 12           |
| 24. | (A) | What are the types of organisation? Explain line and staff organisation with line diagram.   | 12           |
|     |     | (Or)   |              |
|     | (B) | Briefly explain the functions of a manager.  | 12           |
| 25. | (A) | (i) Compare preference shares, equity shares and debentures.<br>(ii) Explain economic order quantity with the help of a diagram.                       | 6+6          |
|     |     | (Or)   |              |
|     | (B) | Explain the procurement and consumption cycle of stock control system.   | 12           |

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**105****October 2017***Time - Three hours  
(Maximum Marks: 75)*

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*(2) Each question carries 1 (one) mark in PART - A and 12 (twelve) marks in PART - B.)*

**PART - A**

1. Name the different types of maintenance.
2. What is collective bargaining?
3. Define accident proneness.
4. List out two factors considered while selecting a site for industry.
5. What are the methods of improving productivity?
6. Define method study.
7. Name the allowance which is not used for calculating standard time.
8. Define employees rating factor.
9. What are the major functions of PPC?
10. Define CPM.
11. What are the different types of inspection?
12. Name the charts used for attributes.
13. Name the different organisations.
14. Define zero defect concept.
15. What is the difference between wage and salary?
16. Define: on the job training.
17. Define working capital.
18. What are the different types of debentures?
19. Define EOQ.
20. What is reorder level?

**[Turn over..**

PART - B

21. (A) Explain three layouts with neat sketches.  
(Or)  
(B) What are the causes and costs of an accident?
22. (A) Explain man-machine chart.  
(Or)  
(B) Write down the different allowances used in calculating standard time and explain.
23. (A) Explain the different types of production with one example for each.  
(Or)  
(B) Explain double sampling plan.
24. (A) Explain the different types of organisation.  
(Or)  
(B) Write down the different types of training available to train the workers and explain in detail.
25. (A) Explain the different methods of depreciation.  
(Or)  
(B) Explain supply chain management.

April 2018

*Time – Three hours*  
*(Maximum Marks: 75)*

- [N.B: (1) Q.No. 8 in PART – A and Q.No. 16 in PART – B are compulsory. Answer any FOUR questions from the remaining in each PART – A and PART – B*
- (2) Answer division (a) or division (b) of each question in PART – C.*
- (3) Each question carries 2 marks in PART – A, 3 marks in Part – B and 10 marks in PART – C.]*

PART – A

1. Define plant layout.
2. What is arbitration?
3. Define productivity.
4. What is PMTS?
5. Define job order production.
6. List any two benefits of ISO to an organisation.
7. What is JIT?
8. Define debentures.

PART – B

9. Write a short note on process type layout.
10. Compare between breakdown maintenance and preventive maintenance.
11. Explain briefly about string diagram.
12. Describe the procedure in making a time study.
13. Explain critical path method (CPM).
14. State the differences between inspection and quality control.
15. List the qualities of a good leader.
16. List the objectives of good stock control system.



PART - C

17. (a) Explain the factors influencing plant location.  
(Or)  
(b) State the important provisions of factories act 1948 governing safety and health of workers.
18. (a) Explain two handed process chart with a neat sketch.  
(Or)  
(b) Write short notes on the following:  
(i) Analytical estimating.  
(ii) Synthesis from standard data.  
(iii) Ratio-delay study.
19. (a) Explain the major functions of production planning and control (PPC) in detail.  
(Or)  
(b) Explain the various types of inspection.
20. (a) Explain the principles of F.W.Taylor's scientific management.  
(Or)  
(b) Write short notes on: (i)Halsey's 50% plan (ii)Rowan's plan.
21. (a) Explain by means of a block diagram how the selling price of a product is determined.  
(Or)  
(b) Explain Economic Order Quantity (EOQ) with a sketch.

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October 2018

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Answer any FOUR questions from the remaining in each PART - A  
and PART - B*

*(2) Answer division (a) or division (b) of each question in PART - C.*

*(3) Each question carries 2 marks in PART - A, 3 marks in Part - B and  
10 marks in PART - C.]*

PART - A

1. Name any four factors to be considered for the selection of site for industry.
2. Mention the personal factors which increase the risk of accident.
3. Write any two objectives of work study.
4. Define routing.
5. Classify sampling plan.
6. Write any four applications of management information system.
7. What is meant by lead time?
8. Draw the symbols used for representing temporary storage and storage in process charts.

PART - B

9. Write short notes on arbitration.
10. Explain any three factors considered for selection of material handling equipment.
11. Explain with block diagram, how the standard time is calculated.
12. What are the advantages of statistical quality control?
13. Explain briefly the sources of recruitment.
14. What are the merits of equity shares?
15. Explain the different elements of inventory carrying cost.
16. What are the functions of disciplinarian and inspector in pure functional organisation?

[Turn over.....

PART - C

17. (a) What are the types of maintenance? Explain any two and state its advantages.

(Or)

- (b) Explain the types of layout with line diagram.

18. (a) What are the various means by which productivity can be increased? Briefly explain each.

(Or)

- (b) Write short notes on: (i) Employees rating factor (ii) Analytical estimating.

19. (a) (i) Explain the factors to be considered for make or buy decision.

- (ii) Explain job order production with an example.

(Or)

- (b) Explain the construction of  $\bar{X}$  and R-charts.

20. (a) Explain briefly the scientific management advocated by F.W. Taylor.

(Or)

- (b) What are the components of wages? Describe each of them.

21. (a) Explain the methods of depreciation.

(Or)

- (b) (i) What are the objectives of purchasing department?

- (ii) The following costs are booked against a work order:

Direct materials = ₹. 7000; Direct labour = ₹. 3500; the factory overhead is 60% based on direct material. The administrative and selling overhead 100% based on direct labour. Determine the cost per unit, if the batch size as per the work order is 350 units.

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**April 2019**

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(Maximum Marks: 75)

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*(2) Answer division (a) or division (b) of each question in PART – C.*

*(3) Each question carries 2 marks in PART – A, 3 marks in Part – B and 10 marks in PART – C.]*

PART – A

1. What is meant by accident proneness?
2. What is operation process chart?
3. Define allowances.
4. What is PPC?
5. Define first piece inspection.
6. Define motivation.
7. What is management?
8. Define prime cost.

PART – B

9. Name any three factors to be considered for selection of site for a plant.
10. Explain collective bargaining.
11. Define productivity and standard of living.
12. Describe route sheet.
13. Explain the different types of capital.
14. What is apprentice training?
15. Explain re-order level.
16. Write a note on centralised inspection.

PART - C

17. (a) What are the different types of plant layout? Explain.  
(Or)  
(b) What are the types of maintenance? Explain.
18. (a) Explain in detail the steps involved in time study.  
(Or)  
(b) With a block diagram, explain how the standard time for a job is determined.
19. (a) Explain major functions of PPC.  
(Or)  
(b) Explain the construction of  $\bar{X}$  and R chart.
20. (a) State and explain the principles of management by F.W. Taylor.  
(Or)  
(b) Explain any two types of leadership style in detail.
21. (a) Explain by means of block diagram how the selling price of a product is determined.  
(Or)  
(b) Explain the different methods of calculating depreciation.
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