Industrial Engineering and Production Management

1. The main aim of industrial engineering is:

(A) Improve productivity

(B) Reduce cost

(C) Improve quality

(D) All of these

Answer: D) All of these

2. The Gantt chart is useful for:

(A) Production control

(B) Project management

(C) Scheduling jobs

(D) All of these

Answer: D) All of these

3. Work study consists of:

(A) Method study

(B) Work measurement

(C) Both A and B

(D) Material study

Answer: C) Both A and B

4. Time study is used to determine:

(A) Standard time

(B) Maximum time

(C) Minimum time

(D) Average time

Answer: A) Standard time

5. Motion economy principles are aimed at:

(A) Reducing fatigue

(B) Increasing work speed

(C) Increasing productivity

(D) All of these

Answer: D) All of these

6. In inventory control, ABC analysis is based on:

(A) Annual consumption value

(B) Alphabetical order

(C) Maximum stock

(D) Unit price

Answer: A) Annual consumption value

7. CPM stands for:

(A) Critical Path Method

(B) Computer Program Management

(C) Control Process Mechanism

(D) None

Answer: A) Critical Path Method

8. PERT stands for:

(A) Project Evaluation and Review Technique

(B) Product Estimation and Review Technique

(C) Project Estimation and Resource Technology

(D) None

Answer: A) Project Evaluation and Review Technique

9. Plant layout deals with:

(A) Arrangement of machines

(B) Arrangement of work areas

(C) Both A and B

(D) None

Answer: C) Both A and B

10. The basic tool for continuous improvement is:

(A) Kaizen

(B) Kanban

(C) Poka-yoke

(D) SMED

Answer: A) Kaizen

11. The reorder level for inventory is calculated as:

(A) Normal usage × Lead time

(B) Average usage × Lead time

(C) Minimum usage × Lead time

(D) Maximum usage × Lead time

Answer: D) Maximum usage × Lead time

12. The main objective of Just-In-Time (JIT) is:

(A) Reduce inventory

(B) Increase lead time

(C) Increase lot size

(D) Increase WIP

Answer: A) Reduce inventory

13. Standard time is the sum of normal time and:

(A) Personal allowance

(B) Fatigue allowance

(C) Delay allowance

(D) All of these

Answer: D) All of these

14. Flow process chart is used for:

(A) Studying sequence of operations

(B) Inventory planning

(C) Demand forecasting

(D) Product design

Answer: A) Studying sequence of operations

15. In ABC analysis, ‘A’ items are:

(A) High value, low quantity

(B) Low value, high quantity

(C) Medium value, medium quantity

(D) Irrelevant

Answer: A) High value, low quantity

16. The main objective of production management is:

(A) Effective utilization of resources

(B) Ensuring product quality

(C) Timely delivery

(D) All of these

Answer: D) All of these

17. The control chart is used for:

(A) Quality control

(B) Time study

(C) Method study

(D) Inventory management

Answer: A) Quality control

18. Economic Order Quantity (EOQ) formula is:

(A) √(2DS/H)

(B) 2DS/H

(C) D/S

(D) D+S+H

Answer: A) √(2DS/H)

19. In line layout, machines are arranged:

(A) As per sequence of operations

(B) According to product variety

(C) Randomly

(D) By department

Answer: A) As per sequence of operations

20. The bottle-neck operation is the:

(A) Slowest operation

(B) Costliest operation

(C) Easiest operation

(D) Fastest operation

Answer: A) Slowest operation

21. In process layout, machines are arranged:

(A) According to function

(B) As per product

(C) In a line

(D) In a circle

Answer: A) According to function

22. Job production is best for:

(A) Large quantity

(B) Unique/customized items

(C) Standard products

(D) Mass production

Answer: B) Unique/customized items

23. Routing is the:

(A) Determination of path for each job

(B) Scheduling of all jobs

(C) Loading of machines

(D) None of these

Answer: A) Determination of path for each job

24. The ratio of productive time to total time is known as:

(A) Utilization

(B) Efficiency

(C) Productivity

(D) Yield

Answer: C) Productivity

25. Mean time between failures (MTBF) is relevant for:

(A) Preventive maintenance

(B) Breakdown maintenance

(C) Product design

(D) All of these

Answer: D) All of these

26. The order of precedence among jobs in queue is called:

(A) Sequencing

(B) Scheduling

(C) Routing

(D) Dispatching

Answer: A) Sequencing

27. The main aim of Kanban is:

(A) Inventory control

(B) Quality inspection

(C) Waste elimination

(D) Capacity expansion

Answer: A) Inventory control

28. Which is a chart to display project activities and timelines?

(A) Gantt chart

(B) Pie chart

(C) Pareto chart

(D) Flow chart

Answer: A) Gantt chart

29. The technique that helps streamline the process and eliminate defects is:

(A) Six Sigma

(B) 5S

(C) MRP

(D) TQM

Answer: A) Six Sigma

30. Lean manufacturing aims to remove:

(A) Waste

(B) Value

(C) Quality

(D) Flexibility

Answer: A) Waste

31. The study of work measurement is also called:

(A) Time study

(B) Method study

(C) Inventory study

(D) Job evaluation

Answer: A) Time study

32. The main cause for inventory is:

(A) Lead time

(B) Fluctuations in demand

(C) Bulk purchase

(D) All of these

Answer: D) All of these

33. Kaizen means:

(A) Continuous improvement

(B) Rapid production

(C) Quality management

(D) Zero defects

Answer: A) Continuous improvement

34. The process of assigning jobs to machines is called:

(A) Loading

(B) Routing

(C) Scheduling

(D) Dispatching

Answer: A) Loading

35. The symbol O in process chart stands for:

(A) Operation

(B) Inspection

(C) Storage

(D) Delay

Answer: A) Operation

36. Technique to compare actual and standard performance is:

(A) Control chart

(B) EOQ

(C) Routing

(D) Scheduling

Answer: A) Control chart

37. The line of balance diagram is used for:

(A) Production scheduling

(B) Inventory management

(C) Maintenance planning

(D) Facility layout

Answer: A) Production scheduling

38. The most flexible type of plant layout is:

(A) Process layout

(B) Product layout

(C) Combination layout

(D) Station layout

Answer: A) Process layout

39. The ratio of actual output to standard output is:

(A) Efficiency

(B) Utilization

(C) Productivity

(D) Performance rating

Answer: A) Efficiency

40. SMED is used for:

(A) Reducing setup time

(B) Reducing run time

(C) Quality testing

(D) Scheduling

Answer: A) Reducing setup time

41. A Pareto chart is used for:

(A) Identifying vital few and trivial many

(B) Scheduling jobs

(C) Forecasting demand

(D) Inventory management

Answer: A) Identifying vital few and trivial many

42. JIT production system is associated with:

(A) Demand pull

(B) Demand push

(C) Both A and B

(D) None

Answer: A) Demand pull

43. Total Quality Management (TQM) focuses on:

(A) Organization-wide culture of quality

(B) Only on production

(C) Only on inspection

(D) Safety management

Answer: A) Organization-wide culture of quality

44. Break-even analysis is used to determine:

(A) Point of zero profit or loss

(B) Maximum output

(C) Minimum cost

(D) Minimum output

Answer: A) Point of zero profit or loss

45. Routing is followed by:

(A) Scheduling

(B) Sequencing

(C) Dispatching

(D) Inspection

Answer: A) Scheduling

46. The basic elements of JIT are:

(A) Zero inventories

(B) Zero queues

(C) Zero defects

(D) All of these

Answer: D) All of these

47. Process layout is suitable for:

(A) Variety of products

(B) Large product volume

(C) Simpler operations

(D) Continuous operations

Answer: A) Variety of products

48. The parameter for "quality at source" is:

(A) Operator’s responsibility

(B) Inspector’s responsibility

(C) Manager’s responsibility

(D) Customer’s responsibility

Answer: A) Operator’s responsibility

49. Inventory that is yet to be used in production is:

(A) Raw material

(B) Work-in-process

(C) Finished goods

(D) Dead stock

Answer: A) Raw material

50. Material Requirement Planning (MRP) is concerned with:

(A) Scheduling materials

(B) Inventory levels

(C) Order quantities

(D) All of these

Answer: D) All of these

51. The purpose of time study is:

(A) Establish time standards

(B) Checking quality

(C) Control cost

(D) All of these

Answer: A) Establish time standards

52. Quality circle is:

(A) Group of workers meeting to solve problems

(B) A physical circle

(C) A scheduling tool

(D) A machine part

Answer: A) Group of workers meeting to solve problems

53. Preventive maintenance aims at:

(A) Preventing breakdowns

(B) Repair after breakdowns

(C) Increasing WIP

(D) Reducing efficiency

Answer: A) Preventing breakdowns

54. Six Sigma represents:

(A) 3.4 defects per million opportunities

(B) Zero defects

(C) 100 defects per million

(D) 10 defects per million

Answer: A) 3.4 defects per million opportunities

55. The process of arranging jobs in the order they are to be performed is:

(A) Sequencing

(B) Routing

(C) Loading

(D) Scheduling

Answer: A) Sequencing

56. The main aim of aggregate planning is:

(A) Match supply with demand

(B) Reduce cost

(C) Increase profit

(D) Quality improvement

Answer: A) Match supply with demand

57. The person responsible for moving goods from one work center to another is:

(A) Dispatcher

(B) Scheduler

(C) Supervisor

(D) Operator

Answer: A) Dispatcher

58. The role of Kanban is in:

(A) Pull production

(B) Push production

(C) Both

(D) None

Answer: A) Pull production

59. Value engineering aims to:

(A) Reduce cost but maintain function

(B) Increase cost

(C) Reduce quality

(D) Increase WIP

Answer: A) Reduce cost but maintain function

60. The technique used for job sequencing is:

(A) Johnson’s rule

(B) Gantt chart

(C) Pareto analysis

(D) Flow chart

Answer: A) Johnson’s rule

61. The most suitable layout for continuous mass production is:

(A) Line layout

(B) Process layout

(C) Static layout

(D) Combination layout

Answer: A) Line layout

62. The concept of “zero inventory” is associated with:

(A) JIT

(B) Kanban

(C) TQM

(D) PERT

Answer: A) JIT

63. Pareto principle is also called:

(A) 80/20 rule

(B) 20/80 rule

(C) 50/50 rule

(D) 30/70 rule

Answer: A) 80/20 rule

64. Work-in-process inventory refers to:

(A) Goods in various stages of production

(B) Finished goods

(C) Raw materials

(D) Office supplies

Answer: A) Goods in various stages of production

65. In CPM, critical path is the:

(A) Longest path

(B) Shortest path

(C) Easiest path

(D) Fastest path

Answer: A) Longest path

66. “Theory of constraints” was developed by:

(A) Goldratt

(B) Deming

(C) Gantt

(D) Taylor

Answer: A) Goldratt

67. The cause of excess inventory is:

(A) Poor demand forecast

(B) Long lead times

(C) High order quantities

(D) All of these

Answer: D) All of these

68. A bar chart is used for:

(A) Scheduling

(B) Designing

(C) Inventory analysis

(D) None

Answer: A) Scheduling

69. The decision tree is a tool for:

(A) Decision making under uncertainty

(B) Quality control

(C) Sequencing

(D) Inspection

Answer: A) Decision making under uncertainty

70. Cycle stock is inventory held:

(A) To meet normal demand

(B) For emergency use

(C) For abnormal conditions

(D) As dead stock

Answer: A) To meet normal demand

71. The major goal of lean production is to:

(A) Eliminate waste

(B) Reduce quality

(C) Increase cost

(D) Increase defects

Answer: A) Eliminate waste

72. Work sampling is a technique for:

(A) Determining proportion of time spent on various activities

(B) Scheduling

(C) Forecasting

(D) Inventory planning

Answer: A) Determining proportion of time spent on various activities

73. The PERT technique gives:

(A) Probabilistic time estimates

(B) Deterministic time estimates

(C) Only average time estimates

(D) Only minimum time estimates

Answer: A) Probabilistic time estimates

74. Total productive maintenance (TPM) integrates:

(A) Maintenance with production

(B) Only preventive maintenance

(C) Only breakdown maintenance

(D) Design with maintenance

Answer: A) Maintenance with production

75. The process of making goods available to customer is:

(A) Distribution

(B) Transportation

(C) Production

(D) Scheduling

Answer: A) Distribution

76. Ishikawa diagram is also known as:

(A) Cause and effect diagram

(B) Flow chart

(C) Control chart

(D) Pareto chart

Answer: A) Cause and effect diagram

77. The law that states “a small percentage of causes leads to a large percentage of effects” is:

(A) Pareto law

(B) Taylor’s law

(C) Gantt law

(D) Deming’s law

Answer: A) Pareto law

78. Computer-integrated manufacturing (CIM) integrates:

(A) Production

(B) Inventory

(C) Design and manufacturing

(D) All of these

Answer: D) All of these

79. Master production schedule is:

(A) Plan for production over time

(B) Demand forecast

(C) Only inventory plan

(D) Only quality plan

Answer: A) Plan for production over time

80. Starvation in production line means:

(A) After a machine, next process is idle due to lack of input

(B) Overburdened process

(C) Bottleneck process is always full

(D) Quality defect

Answer: A) After a machine, next process is idle due to lack of input

81. Vendor managed inventory (VMI) responsibility lies with:

(A) Vendor

(B) Buyer

(C) Both

(D) None

Answer: A) Vendor

82. The main aim of poka-yoke is:

(A) Prevent defects

(B) Quality inspection

(C) Increased production

(D) Process planning

Answer: A) Prevent defects

83. Statistical quality control uses:

(A) Statistical techniques for process control

(B) Only manual inspection

(C) Input-output analysis

(D) Inventory control

Answer: A) Statistical techniques for process control

84. The main advantage of cellular layout is:

(A) Reduced material movement

(B) Increased set-up time

(C) Random handling

(D) Large storage

Answer: A) Reduced material movement

85. Process chart is used for:

(A) Improving method

(B) Comparing costs

(C) Inventory control

(D) Scheduling

Answer: A) Improving method

86. The check sheet is used for:

(A) Collecting data

(B) Forecasting

(C) Decision making

(D) Production planning

Answer: A) Collecting data

87. Standard time is:

(A) Normal time + allowances

(B) Normal time only

(C) Allowances only

(D) Observed time + delay

Answer: A) Normal time + allowances

88. Quality is defined as:

(A) Fitness for use

(B) Compliance with specification

(C) Minimum cost

(D) Safety

Answer: A) Fitness for use

89. The process capability index (Cpk) is a measure of:

(A) Process capability

(B) Machine efficiency

(C) Operator skill

(D) Process loss

Answer: A) Process capability

90. Effective capacity is:

(A) Actual output over a period

(B) Maximum possible output

(C) Designed output

(D) None

Answer: A) Actual output over a period

91. The point where total revenue equals total cost is:

(A) Break-even point

(B) Zero profit point

(C) Profit maximizing point

(D) Minimum sales point

Answer: A) Break-even point

92. The major section of a product layout is:

(A) Assembly section

(B) Machining section

(C) Painting section

(D) Testing section

Answer: A) Assembly section

93. Sequencing problems are solved using:

(A) Johnson’s rule

(B) Gantt charts

(C) Pareto analysis

(D) Kanban

Answer: A) Johnson’s rule

94. The symbol ‘D’ in process chart stands for:

(A) Delay

(B) Operation

(C) Inspection

(D) Storage

Answer: A) Delay

95. Normally, plant layout review is carried out:

(A) Periodically

(B) Only once at design

(C) Every day

(D) Never

Answer: A) Periodically

96. For minimum total cost, order quantity should be:

(A) Economic order quantity (EOQ)

(B) Random

(C) Maximum order quantity

(D) Average lot size

Answer: A) Economic order quantity (EOQ)

97. Routing in production management is deciding:

(A) Exact path for a process

(B) Duration of process

(C) Inventory needed

(D) Quality standards

Answer: A) Exact path for a process

98. The “drum-buffer-rope” is a term from:

(A) Theory of Constraints (TOC)

(B) Lean production

(C) Kaizen

(D) TQM

Answer: A) Theory of Constraints (TOC)

99. SMED helps to reduce:

(A) Set-up time

(B) Lead time

(C) Processing time

(D) Throughput time

Answer: A) Set-up time

100. Benchmarking is:

(A) Comparing with best practices

(B) Copying competitor’s process

(C) Just copying results

(D) None

Answer: A) Comparing with best practices

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