1. Wire is generally produced by
   a. Rolling
   b. Forging
   c. Extrusion
d. Drawing

2. Gantt Charts indicates
   a. Comparison of actual progress with scheduled progress
   b. Balance of work to be done
   c. Progressive cost of projects
d. Inventory cost

3. Hardness of a material may be defined as resistance to
   a. local penetration
   b. machining
   c. wear
d. any of the above

4. Process Layout is preferred when there is
   a. Variety of product to handle
   b. Single product to handle
c. Standardized product to handle
d. During Maturity of product

5. TPM stands for
   a. Total Productive maintenance
   b. Total Preventive Maintenance
c. Total Periodical Maintenance
d. Total Program Maintenance

6. Quality circle is a concept originated from
   a. Russia
   b. America
c. India
d. Japan

7. Bill of Materials helps in
   a. Procurement of Material
   b. Planning of Material
c. Quotation Preparation
d. All of the above

8. WIP stands for
   a. Wastage in Part
   b. Work in Programme
c. Work in Progress
d. Work in Product
9. Please arrange the right serial in which they are came in to picture I) MRP II, II) MRP, III) ERP
   a. I, II, III
   b. II, I, III
   c. III, II, I
   d. III, I, II

10. Inventory level in just in Time (JIT) manufacturing system is ________________
    a. Zero Inventory
    b. Process inventory only
    c. Minimum Inventory
    d. Distribution Inventory

11. Two Bid Tendering System means
    a. Offers received twice from the vendors
    b. Offers received from two vendors
    c. Technical & Commercial offers received separately in two separate sealed envelopes
       as same time
    d. Combined Technical & Commercial offers are provided together in two copies in sealed envelopes.

12. A shop owner with an annual constant demand of ‘A’ units has ordering costs of Rs. ‘P’ per order
    and carrying costs Rs. ‘I’ per unit per year. The economic order quantity for a purchasing model
    having no shortage may be determined from
    a. Root under $\sqrt{2AI/P}$
    b. Root under $\sqrt{4AP/I}$
    c. Root under $\sqrt{2AP/I}$
    d. Root under $\sqrt{2IP/A}$

13. In break even analysis, total cost consist of
    a. Fixed cost
    b. Variable cost
    c. Fixed cost + Variable cost
    d. Fixed cost + Variable cost + Overheads

14. A 20 tonne press implies that the
    a. Weight of press is 20 tonnes
    b. Press can handle works weighing upto 20 tonnes
    c. It can exert pressure up to 20 tonnes
    d. Its foundation designed for 20 tonnes
15. ABC analysis deals with
   a. analysis of process chart
   b. flow of material and in case of trouble locate source of trouble
   c. ordering schedule of job
   d. controlling inventory costs money

16. Forecasting is not much restrained by one of the following factors namely
   a. Quality of available data
   b. Availability schedule
   c. Expertise available with the organization
   d. Availability of essential facilities needed for forecasting

17. The aim of value analysis is
   a. To increase the cost of product after analyzing different production aspects
   b. To reduce cost without reducing reliability & liability
   c. To produce goods at high cost with more utility
   d. To use new & costly materials

18. Which one of following is not an important factor which affect manpower planning
   a. Working hours
   b. Number of shifts
   c. Nature of production
   d. Stock position of product

19. Which one of the following statements is not true about operation research
   a. It helps the management in controlling & planning
   b. It helps in the utilization of applied statistical methods
   c. It has made it possible to reduce various factors of problems in quantitative terms
   d. It does not help in knowing the overflow of goods & services

20. In perpetual inventory control the material is checked as it reaches its
   a. Minimum value
   b. Maximum value
   c. Average value
   d. Alarming value

21. Chilled cast iron has
   a. no graphite
   b. a very high percentage of graphite
   c. a low percentage of graphite
   d. graphite as its basic constituent of composition
22. One type of control chart for attributes is a
   a. p-chart.
   b. x-bar chart.
   c. R-chart.
   d. CpK chart.

23. A customer service hotline has received an average of 7 complaints a day for the last 25 days. What type of control chart should be used to monitor this hotline?
   a. c-chart
   b. R-chart
   c. p-chart
   d. X-bar chart

24. Shot peening of casting is used for
   a. Stress Relieve
   b. Corrosion resistance
   c. Impact Strength
   d. Hardness

25. Carbon is used in metallurgy, because it is
   a. Reducing agent
   b. Oxidizing agent
   c. Very cheap
   d. Good electrolyte

26. ABC analysis deals with
   a. analysis of process chart
   b. flow of material
   c. ordering schedule of job
   d. controlling inventory cost money

27. Strain hardening of metal/alloy reduces its
   a. Strength
   b. Hardness
   c. Ductility and Plasticity
   d. None above

28. A manufacturing engineer is designing a process that must be able to produce a shaft with a diameter of 2.5 cm plus or minus 0.01 cm. If the process capability must be 1.5, what is the maximum process standard deviation?
   a. 2.49
   b. 0.0133
29. Razors are made of
   a. mild steel
   b. low carbon steel
   c. medium carbon steel
   d. high carbon steel

30. Zinc plating is widely used for ________-fastners
   a. Steel
   b. Aluminium
   c. Brass
   d. Cast iron

31. A "Fixture" is used
   a. For holding and guiding the tool in Drilling, Reaming or Tapping operation
   b. For holding the work in Milling, Grinding, Planning or Turning operations
   c. To check the Accuracy of the work piece
   d. None of the above

32. A device or technique that ensures production of a good unit every time is a
   a) zero defect.
   b) Poka Yoke.
   c) control chart.
   d) Pareto Chart.

33. Which metal is used in storage batteries?
   a. Copper
   b. Lead
   c. Tin
   d. Iron

34. The operation to remove the scale formed during rolling is called
   a. Skimming
   b. Pickling
   c. Shot blasting
   d. Slitting

35. A dummy activity is required when
   a. the network contains two or more activities that have identical starting and ending events.
   b. two or more activities have the same starting events.
a. two or more activities have different ending events.
b. two or more activities have the same ending events.

36. The pig iron is the name given to
   a. Raw material for blast furnace
   b. Product of blast furnace made by reduction of iron ore
   c. Iron containing huge quantities of carbon
   d. Iron is molten form in the ladle

37. What is the probability that a project with a mean completion time of 23.9 days and a variance of 6 days will be finished in 26 days?
   a. 0.37
   b. 0.63
   c. 0.20
   d. 0.80

38. The brazing metals & alloys commonly used are
   a. Copper
   b. Copper alloys
   c. Silver alloys
   d. All of the above

39. Forge welding is best suited for
   a. Stainless steel
   b. High carbon steel
   c. Wrought iron
   d. All of the above

40. Which of the following carbon steels is most weldable
   a. 0.15% carbon steel
   b. 0.30% carbon steel
   c. 0.50% carbon steel
   d. 0.75% carbon steel

41. No lubricant is required when cutting threads in
   a. Tungsten carbide
   b. Mild steel
   c. Titanium
   d. Brass or cast iron

42. Ceramic tools are made from
   a. Tungsten oxide
   b. Silicon carbide
c. Cobalt
d. Aluminium oxide

43. ISO : 9001 deals with
   a. Quality Management System
   b. Lean management system
   c. Environment management system
   d. Plant maintenance system

44. The material used for coating the electrode is called
   a. Protective layer
   b. Binder
   c. Slag
   d. Flux

45. Centrifugal casting method is used for objects that are
   a. Heavy
   b. Symmetrical
   c. Both a & b
   d. Unsymmetrical

46. The standard time of an operation has been calculated as 10 min. The worker was rated at 80%. If the relaxation and other allowances were 25%, then the observed time would be:
   a. 12.5 min
   b. 10 min
   c. 8 min
   d. 6.5 min

47. Weld splatter is a
   a. Flux
   b. Electrode casting
   c. Welding defect
   d. Welding test

48. Powder metallurgy techniques are used in the production of
   a. High carbon tool steels
   b. HSS tools
   c. Tungsten carbide tools
   d. Twist drills
49. Six Sigma is
   a. A statistical measurement technique
   b. An indicator which indicates goodness of our services, products and processes
   c. A mechanism to draw comparisons to other similar and dissimilar processes
   d. All of them

50. Countermeasures for inventory are
   a. Reducing supplier lead time
   b. Reducing internal ordering time
   c. Reducing production batch sizes
   d. All of them

51. Kaizen means
   a. Lean action
   b. Continuous work
   c. Change of better
   d. Housekeeping

52. Takt is the word from language of
   a. Japanese
   b. German
   c. French
   d. English

53. A product is made of two components in series; each component has a reliability of 0.90. What is the reliability of this product?
   a. 0.90
   b. 0.891
   c. 0.99
   d. 0.81

54. Grinding cracks are usually caused by
   a. High speed of grinding wheel
   b. Improper selection of coolant
   c. Stresses set up by local heating
   d. All of the above

55. Where different items of machinery and equipments are arranged in sequence of operation
   a. Product layout
   b. Process layout
   c. Fixed position layout
   d. GT layout
56. F.M.E.A stands for
   a. Failure mode and Emancipation Analysis
   b. Fissure mode and Effect Analysis
   c. Failure Mode and Effect Analysis
   d. Fragmentation mode and Emancipation Analysis

57. Hardest material so far found is
   a. Diamond
   b. Graphite
   c. Carborandum
   d. None

58. Grinding wheel is flooded with coolant in order to
   a. Remove chips
   b. Remove heat
   c. Clean the wheel
   d. Clean the job

59. Boring is generally
   a. followed by reaming
   b. preceded by reaming
   c. followed by drilling
   d. preceded by drilling

60. Work measurement is carried out in
   a. Standard Man Hours
   b. Standard Man Minds
   c. Standard Man Days
   d. Standard Man Years
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