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Score: 26/100 (26.00%)

Code: 4789

1. Which bearing is supporting the shaft of moving coil assembly in a PMMC instrument?

- A) Steel bearings B) Bush bearings
C) **Jewelled bearings** D) Gun metal bearings (Incorrect)

2. Which characteristics enable the deflection of pointer in the attraction type moving iron meter?

- A) Weight of the soft iron pieces B) Deflection is inversely proportional to current (Incorrect)
C) **Deflection is independent of current direction** D) Deflecting and controlling torques are

3. Which control is used in repulsion type moving iron instrument to keep the pointer at zero position?

- A) **Spring control** B) Air damping control (Incorrect)
C) Magnetic repulsion control D) Magnetic attraction control

4. Which frame is used for winding the coil of PMMC meter?

- A) Steel frame B) Wooden frame
C) Ceramic frame (Incorrect) D) **Aluminium frame**

5. How the sensitivity of voltmeter is determined?

- A) FSD current (Incorrect) B) Meter coil resistance
C) **Ohms per volt rating** D) Maximum voltage measurement

6. What is the name of the procedure carried out to ensure the trustworthy standards of the measuring instrument?

- A) **Calibration (Correct)** B) Range test
C) Re-alignment D) Testing standards

7. What is the unit of inductance?

- A) Joule B) Farad
C) **Henry** D) Watts (Incorrect)

8. Which unit is used to measure capacitance value?

- A) Mho B) Ohm (Incorrect)
C) **Farad** D) Henry

9. What is the result of hysteresis loss in magnetic material?

- A) Back emf increases B) Eddy current decreases (Incorrect)
C) Magnetic flux increases D) **Energy loss takes place**

10. What is the name of effect of changing current in one coil, induces EMF in nearby coil?

- A) Coupling B) Induction (Incorrect)
C) Self induction D) **Mutual induction**

11. What is the main problem caused for severe pitting in relays?

- A) Low contact current B) **Excessive contact current**
C) Chatter during a slow release (Incorrect) D) Excessive number of operations

12. Why the transformer core is made as thin laminations?

- A) **To minimize eddy current losses (Correct)** B) To increase the hysteresis losses
C) To maximize eddy current losses D) To increase core saturation losses

13. What is the power dissipation of the standard TTL chip?

- A) 5 mW/gate (Incorrect) B) **10 mW/gate**
C) 15 mW/gate D) 20 mW/gate

14. Which factor influences the severity of electrical shock?

- A) Very low DC voltage B) **Duration of current passing**
C) Level of current in micro ampere (Incorrect) D) Person receives the shock

15. What is the use of screw driver?

- A) Hold the screws B) **Tighten or loosen screws**
C) Tighten or loosen bolts D) Tighten or loosen rivets (Incorrect)

16. What is the reason for electric fire?

- A) Deviation B) Open circuit
C) **Overloading** D) Proper earthing (Incorrect)

17. What is the effect of electric shock at very low voltage levels (Less than 40v)?

A) Fibrillation (Incorrect)

B) Muscles contact

C) Burning of the skin

D) Unpleasant tingling sensation (Correct)

18. What is the purpose of covering provided over the electrical conductor?

A) Increase current flow

B) Reduce current flow

C) Decrease voltage rating

D) Protection against weather (Correct)

19. What is the percentage of conductivity of electric current in aluminium?

A) 0.22 (Incorrect)

B) 0.47

C) 0.56

D) 0.76

20. How the single strand wire is called?

A) Hook - up wire (Correct)

B) Twisted wire

C) Flexible wire

D) Multistrand wire

21. How many gauge numbers in SWG, changed to double the cross section area of the conductor?

A) Two gauge sizes decreased

B) Four gauge sizes increased

C) Five gauge sizes increased

D) Three gauge sizes decreased (Correct)

22. What is the purpose of standard wire gauge (SWG)?

A) Measure current

B) Measure voltage (Incorrect)

C) Measure diameter of wire

D) Measure insulation of wire

23. What is the effect on the current flow with increased diameter of conductor?

A) Resistance increases

B) Opposes more current

C) More voltage dropped

D) Allows high current flow (Correct)

24. What is the relation of wire diameter with current carrying capacity of conductor?

A) Wire gets less heat (Incorrect)

B) Directly proportional

C) Inversely proportional

D) Drops more voltage across it

25. Which terminal of the meter is connected for measuring electrical quantity?

A) Input terminal

B) Output terminal

C) Output terminal (Incorrect)

D) Pointer mechanism

26. Which electrolyte is used in lead-acid battery?

A) Zinc chloride

B) Sulphuric acid (Correct)

C) Alkaline solution

D) Potassium hydroxide solution

27. Which battery is used for cellular phones?

A) Nickel ion (Incorrect)

B) Lithium ion

C) Zinc chloride

D) Sodium sulphur

28. How batteries are classified based on their working?

A) Dry cells and alkaline cells

B) Button cells and lithium cells (Incorrect)

C) Primary cells and secondary cells

D) Cylindrical cells and rectangular cells

29. Which method is adopted to charge a car battery with voltage rating of 2.3 V per cell?

A) Float charging method

B) Trickle charging method

C) Constant current charging method

D) Constant voltage charging method (Correct)

30. Which device is used to produce hard copy of a document in a computer?

A) Printer

B) Monitor

C) Modem

D) Speaker (Incorrect)

31. What is the advantage of SMPS in computer?

A) Bulky

B) High efficiency

C) High frequency noise low

D) Servicing of SMPS is easy (Incorrect)

32. What is the full form of the abbreviation CD-ROM in computer?

A) Classified Device Read Only Memory

B) Computer Disk Read Only Memory

C) Connectivity Digital Read Only Memory

D) Compact Disk Read Only Memory (Correct)

33. Which codes are stored in computer ROM BIOS chip?

A) Change codes

B) Temporary codes

C) Permanent codes (Correct)

D) Partial change codes

34. Which memory device loses data on power failure?

A) RAM (Correct)

B) ROM

C) Hard disc

D) CD ROM

35. Which section is used by the processor to save instructions?

A) Memory (Correct)

B) System unit

C) Graphics card

D) Micro processor

36. Which three terminal voltage regulator IC has adjustable output?

- A) LM 100 (Incorrect) B) LM 105
C) LM 305 **D) LM 317**

37. What is the current rating of voltage regulator IC LM338K?

- A) 2A B) 3A
C) 4A **D) 5A (Correct)**

38. Which method is followed to troubleshoot the problem causing section by the symptom?

- A) Step by step method B) Sensory test method
C) Trial and error method (Incorrect) **D) Logical approach method**

39. What is the gate current (I_g) of the JFET, when reverse biased?

- A) Practically very low (Incorrect) **B) Practically zero**
C) Practically unity D) Practically infinity

40. Which is the N - channel FET?

- A) AC supply connected to drain termin **B) Main current flows through N-doped material**
C) Main current flows through P-doped material D) S-terminal connected to positive (Incorrect)

41. Which device is a unipolar transistor?

- A) UJT **B) FET**
C) BJT (Incorrect) D) IGBT

42. What is the input impedance of IGBT?

- A) Low input impedance **B) High input impedance (Correct)**
C) Medium input impedance D) Infinity input impedance

43. What is the advantage of MOSFET?

- A) Superior current conduction capability **B) Low gate signal power requirements**
C) Very low on-state voltage (Incorrect) D) Low driving power

44. Which electrical quantity controls the operation of the bipolar transistor device?

- A) Energy (Incorrect) **B) Current**
C) Voltage D) Frequency

45. Why the electronic device IGBT is preferred over the power MOSFET?

A) Low switching speed

B) Higher driving power requirement

C) Higher switching repetition rates

D) Suitability for medium power applications (Incorrect)

46. Which is the output pin number IC 555 timer?

- A) Pin number 6 B) Pin number 5
C) Pin number 5 (Incorrect) **D) Pin number 3**

47. What is successive approximation (SAR)?

- A) Method of IC fabrication **B) Method of D/A conversion (Correct)**
C) Method of D/A conversion D) Method of SMT

48. Which is the major factor determines the quality performance of A/D converter?

- A) Depends on data latch (Incorrect) **B) Measuring parameter**
C) Measuring parameter D) Conversion cycle

49. What is the minimum forward current I_f for single colour LEDs?

- A) 5 MA B) 10 MA (Incorrect)
C) 20 MA D) 30 MA

50. What is the forward voltage drop of single colour Red LED?

- A) 1.8 V** B) 2 V
C) 2.1 V D) 2.2 V (Incorrect)

51. What is the typical forward voltage drop of the RED colour LED?

- A) 1.8 V** B) 2 V
C) 2.1 V D) 2.2 V (Incorrect)

52. What is the range of photo current for photo transistor BPX 38?

- A) 0.1MA to 1.2MA **B) 0.2MA to 1.6MA**
C) 0.3MA to 2.7MA D) 0.4MA to 3.8MA (Incorrect)

53. What is the type of transistor BPX81?

- A) Uni - Junction transistor **B) NPN - Photo transistor (Correct)**
C) PNP - Photo transistor D) Audio frequency transistor

54. Which circuit uses photo-darlington devices?

- A) DC circuits** B) Counter circuits (Incorrect)

C) Amplifier circuits

D) AC powered circuits

55. Which of the device is opto-coupled TRIACS?

A) BT136

B) B3202

C) 2N2648

D) MOC3020 (Incorrect)

56. What is the percentage of charge accumulated by the capacitor at the end of 2 time constant limit?

A) 0.4

B) 0.5 (Incorrect)

C) 0.632

D) 0.864

57. How gate is biased in JFET?

A) AC supply function

B) Forward biased (Incorrect)

C) Reverse biased

D) Dual supply function

58. Which is the N - channel FET?

A) AC supply connected to drain termin (Incorrect)

B) Main current flows through N-doped material

C) Main current flows through P-doped material

D) S-terminal connected to positive

59. What is the switching speed of solid state relays?

A) 1 to 25 nano seconds

B) 10 to 60 nano seconds

C) 1 to 100 nano seconds

D) 1 to 100 milli seconds (Incorrect)

60. What is the maximum current ratings of solid state relays available in high power packages?

A) 1 Amp

B) 10 Amp (Incorrect)

C) 40 Amp

D) 100 Amp

61. Which is the drain current (I_d) in JFET?

A) Electron from drain to gate

B) Electron from source to drain

C) Electron from drain to source

D) Electron from gate to source (Incorrect)

62. What is the maximum power dissipation P_{max} for BF 245B?

A) 100 mw

B) 200 mw

C) 300 mw

D) 400 mw (Incorrect)

63. Which semiconductor devices are composed inside the solid state relays?

A) Diodes and transistors

B) Thyristor and transistors

C) MOSFETs and IGBTs (Incorrect)

D) UJYs and FETs

64. What is the function of solid state relay(SSR)?

A) Low pass filter

B) High frequency oscillator

C) High gain amplifier

D) High speed switching (Correct)

65. How the lamp failures caused by the high inrush currents in lamp dimmer circuits using TRIAC is eliminated?

A) By the fuse (Incorrect)

B) Using MCB

C) Using Safety resistor

D) By soft start circuit

66. What type of control is used for FET?

A) Resistance controlled device

B) Voltage controlled device (Correct)

C) Current controlled device

D) Frequency controlled device

67. Which characteristics exhibits the current conduction increases while the voltage across the devices decreases in a DIAC?

A) Linearity characteristics

B) Negative resistance characteristics

C) Positive resistance characteristics (Incorrect)

D) Nonlinearity characteristics

68. How the solid state relays are working for increased lifetime?

A) Bulky profile (Incorrect)

B) Slower in operations

C) Spark generated during switching

D) No moving parts to wear and tear

69. Which type of defects are occurring in solid state relays?

A) More sparking (Incorrect)

B) Intermittent working

C) Tendency to fail open

D) Tendency to fail shorted

70. When does the zener diode begins to conduct in the reverse biased condition?

A) When bias voltage reached 0.7V

B) After the barrier voltage cancelled (Incorrect)

C) Voltage across zener reached 0.3V

D) Voltage across it reached the zener voltage

71. Which is the first step followed in troubleshooting of electronic circuit?

A) Thermal test

B) Chemical test (Incorrect)

C) Mechanical test

D) Physical and sensory test

72. What is the disadvantage of the two diode full wave rectifier compared with a bridge rectifier?

A) DC output level is higher

B) The ripple frequency is higher (Incorrect)

C) The need of bulky transformer

D) Each diode carries half the load current

73. Which impurity is added to pure semiconductor to form N-type material?

- A) Boron
- B) Indium
- C) Arsenic (Correct)**
- D) Gallium

74. What is the name of the process of converting AC into DC voltage?

- A) Inverting
- B) Rectifying (Correct)**
- C) Amplifying
- D) Demodulating

75. What is the peak to peak voltage in a bridge rectifier circuit with load current of 10 mA, capacitance of 470 F and 50 Hz supply frequency?

- A) 0.213 v**
- B) 1.525 v
- C) 2.134 v (Incorrect)
- D) 3.567 v

76. How the mechanical zero error of panel meter is corrected?

- A) By replacing pointer
- B) By replacing moving coil (Correct)**
- C) By replacing moving coil
- D) Keeping the meter in vertical position

77. At which temperature the 6040 solder start meeting?

- A) 100 Degree Centigrade
- B) 200 Degree Centigrade**
- C) 300 Degree Centigrade
- D) 380 Degree Centigrade (Incorrect)

78. What is the range of temperature used in soldering station?

- A) 150 Degree Centigrade to 450 Degree Centigrade**
- B) 450 Degree Centigrade to 600 Degree Centigrade
- C) 600 Degree Centigrade to 800 Degree Centigrade
- D) 800 Degree Centigrade to 1000 Degree Centigrade (Incorrect)

79. What is the name of flux used for soldering electronic components?

- A) Resin
- B) Rosin**
- C) Mild acid (Incorrect)
- D) Organic acid

80. What is the full form of the abbreviation SPDT used in switches?

- A) Single Phase Dual Throw (Incorrect)
- B) Single Pole Single Throw
- C) Single Pole Double Throw**
- D) Shared Pole Double Throw

81. Which ratio of tin-lead combination is used for electronic component soldering work?

- A) 40:60
- B) 20:40 (Incorrect)
- C) 60:40:00**
- D) 63:37:00

82. When does the rosin flux melts in a soldering process?

- A) After the solder melts
- B) When the solder is melting
- C) During the solder is melting
- D) When the solder is heated (Correct)**

83. Which soldering instrument has hot air blowing facility?

- A) Soldering iron
- B) Soldering station**
- C) Wave soldering machine (Incorrect)
- D) Temperature controlled soldering iron

84. Which gauge number of rosin-cored solder is suitable for soldering medium sized joints?

- A) 16 gauge rosin cored
- B) 18 gauge rosin cored**
- C) 22 gauge rosin cored
- D) 24 gauge rosin cored (Incorrect)

85. What is the effect of over heating on soldering a joint?

- A) Cold joint
- B) Poor wetting
- C) Dull grainy surface (Correct)**
- D) Flux trapped against lead

86. What is the name of defect if the flux is unable to remove the tarnish from the soldered joint?

- A) Cold joint**
- B) Poor wetting (Incorrect)
- C) Pits and voids
- D) Dull gravity surface

87. Why the solvent Iso Propyl Alcohol (IPA) is used on the solder joint?

- A) To help the corrosive action
- B) Cleaning before soldering the joint
- C) To break down the acid within the joint (Incorrect)
- D) Remove residual flux and prevent corrosion**

88. What is the defect on the soldered joint, if it is cooled by blowing air?

- A) Poor wetting (Incorrect)
- B) Pits and voids
- C) Dry solder joint**
- D) Dull grainy surface

89. Which coding system for transistor type numbering system is followed by American standard?

- A) JIS standard
- B) Home codes
- C) JEDEC standard (Correct)**
- D) PRO-ELECTRON standard

90. What in the current gain of a common ? base amplifier?

- A) Unity (Incorrect)
- B) Infinity
- C) Greater than 1
- D) Less than 1**

91. What is the name of multi-stage amplifiers?

- A) Cascoded amplifier
- B) Cascaded amplifier**

C) Complementary symmetry amplifier
D) Darlington pair amplifier (Incorrect)

A) Provides positive feedback
C) Easily sets saturated

B) Never reach saturation (Correct)
D) Gives maximum distortion

92. Which configuration of transistor amplifier is most commonly used in electronic circuits?

A) Common base configuration
C) Common collector configuration (Incorrect)
B) **Common emitter configuration**
D) Common drain amplifier configuration

93. Why transistors made of silicon is preferred over the germanium semiconductor material?

A) Complex design
C) Requires complicated bias arrangement (Incorrect)
B) **Higher thermal stability**
D) Silicon transistor needs low cut-in-voltage

94. Why NPN type of transistors are preferred over the PNP type transistors?

A) NPN has lower switching speed (Incorrect)
C) **NPN has higher switching speed**
B) NPN has good bias stability
D) Low operating voltage

95. What type of packaging is generally used to transistors utilized for low power amplification?

A) Metal packaging
C) Ceramic packaging
B) **Plastic packaging**
D) Plastic packaging with metal heatsinks (Incorrect)

96. What is the advantage of using bias in transistor circuits?

97. What is the purpose of using positive feedback in amplifiers?

A) To produce modulation (Incorrect)
C) **To produce oscillation**
B) To produce demodulation
D) To produce multiplexion

98. Why the complementary - symmetry amplifier is preferred over the other types of amplifier configurations?

A) To minimize the gain
C) To get more voltage gain (Incorrect)
B) To get less distortion
D) **To eliminate the transformer**

99. What is the use of clamper in electronic circuits?

A) For slicing both peaks
C) For negative peak clipping
B) For positive peak clipping (Incorrect)
D) **For DC component restoration**

100. When does the biased positive clipper removes the portion of input signal?

A) During the negative half cycle of input
C) Signal voltage equals the bias battery voltage
B) Signal voltage is lesser than bias battery
D) **Signal voltage becomes greater than bias battery voltage (Correct)**