

Student Name: _____	Roll No: _____
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1. What is the maximum safe reverse voltage rating of a diode?

- | | |
|-------------------------------|-----------------------|
| A) Forward break down voltage | B) Break down voltage |
| C) Knee voltage | D) PIV voltage |

2. Which soldering instrument has hot air blowing facility?

- | | |
|---------------------------|--|
| A) Wave soldering machine | B) Temperature controlled soldering iron |
| C) Soldering station | D) Soldering iron |

3. What is the phase relationship between the applied voltage and current in the primary of a transformer with open secondary winding?

- | | |
|---------------------------------------|---------------------------------------|
| A) Voltage lags current by 45 Degree | B) Current lags voltage by 90 Degree |
| C) Current leads voltage by 90 Degree | D) Voltage leads current by 45 Degree |

4. Which type of wave is generated in Schmitt trigger circuit?

- | | |
|--------------------|-------------------|
| A) Triangular wave | B) Sine wave |
| C) Square wave | D) Saw tooth wave |

5. Which IC is used for the function of 4 bit shift register?

- | | |
|------------|------------|
| A) IC 7493 | B) IC 7447 |
| C) IC 7495 | D) IC 7404 |

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

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

7. How many transistors are built inside the Very Large Scale Integration (VLSI) IC package?

- | | |
|----------------------------|--------------------------|
| A) 100 to 1000 transistors | B) 1000 and above |
| C) 1 to 10 transistors | D) 10 to 100 transistors |

8. What is the code number of TRIAC?

- | | |
|----------|-----------|
| A) BFW10 | B) 2N1597 |
| C) BT136 | D) 2N2646 |

9. How many layers of PN - junctions are used in SCR fabrication?

- | | |
|-------------------------------|--------------------------------|
| A) Three layer four junctions | B) Three layer three junctions |
| C) Two layer two junctions | D) Four layer three junctions |

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

- | | |
|----------------------|--------------------|
| A) Pointer mechanism | B) Output terminal |
| C) Output terminal | D) Input terminal |

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

- | | |
|-----------|------------|
| A) 2N2648 | B) MOC3020 |
| C) BT136 | D) B3202 |

12. What is the colour code for 100 Ohm resistor?

- | | |
|------------------------|------------------------|
| A) Brown, black, brown | B) Black, brown, black |
| C) Brown, black, red | D) Brown, brown, brown |

13. Which application the clamper circuit is used in electronics?

- | | |
|---------------------|--------------------|
| A) Storage counters | B) Power supplies |
| C) Radars | D) Radio receivers |

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

- | | |
|-------------|-------------|
| A) 60:40:00 | B) 40:60 |
| C) 20:40 | D) 63:37:00 |

15. Which parameter is used in the working of moving coil meter?

- | | |
|------------------------------|--------------------------|
| A) Eddy current damping | B) Spring control |
| C) Permanent magnetic fields | D) Stray magnetic fields |

16. What is the difference of Colpitts oscillator compare to Hartley oscillator?

- | | |
|-------------------------|----------------------------|
| A) Uses split capacitor | B) Uses SCR combination |
| C) Uses split inductor | D) Uses crystal oscillator |

17. What is the result of forced air is blown to cool the joint

while soldering?

- | | |
|--|----------------------------------|
| A) Solder setting very slowly | B) Disturbs the chemical bonding |
| C) Joint becomes mechanically stronger | D) Results in dry brittle joint |

18. Which class of fire is classified involving metals?

- | | |
|------------|------------|
| A) Class D | B) Class B |
| C) Class C | D) Class A |

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

- | | |
|-----------------------|-------------------|
| A) Gun metal bearings | B) Bush bearings |
| C) Jewelled bearings | D) Steel bearings |

20. Which diode is used in low power communication circuits?

- | | |
|---------------------|----------------------|
| A) Signal diodes | B) Switching diodes |
| C) Rectifier diodes | D) High power diodes |

21. What is the maximum drain current I_D for BFW10?

- | | |
|----------|----------|
| A) 20 mA | B) 30 mA |
| C) 10 mA | D) 5 mA |

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

- | | |
|---|--|
| A) 600 Degree Centigrade to 800 Degree Centigrade | B) 450 Degree Centigrade to 600 Degree Centigrade |
| C) 150 Degree Centigrade to 450 Degree Centigrade | D) 800 Degree Centigrade to 1000 Degree Centigrade |

23. Which tool is used to measure the size of wire?

- | | |
|------------------------|-----------------|
| A) Standard wire gauge | B) Feeler gauge |
| C) Steel rule | D) Try square |

24. Which is the major factor to determine the quality performance of A/D converter?

- | | |
|------------------------|--------------------------------------|
| A) Number of bits used | B) Number of bits used |
| C) Degree of accuracy | D) Proportional to the binary weight |

25. What is the percentage of sulphuric acid in electrolyte used for lead-acid batteries?

- | | |
|--------|--------|
| A) 25% | B) 40% |
| C) 12% | D) 27% |

26. What is the drawbacks of LDR?

- | | |
|---|---|
| A) Available different sizes and specifications | B) More sensitive |
| C) Made of low resistance material with few holes | D) Cannot be used to determine precise light levels |

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

- | | |
|---|----------------------|
| A) Plastic packaging with metal heatsinks | B) Metal packaging |
| C) Plastic packaging | D) Ceramic packaging |

28. What is the function of schottky diode BA 157 in SMPS circuit?

- | | |
|------------------------|----------------------|
| A) Error amplifier | B) Switching diode |
| C) Fast recovery diode | D) Voltage regulator |

29. Which device converts digital data from computer into analog data and transmit through telephone line?

- | | |
|-----------------|--------------|
| A) Cache memory | B) Chipset |
| C) MODEM | D) Processor |

30. Why the soft iron pieces in the moving iron meter is tongue shaped?

- | | |
|-----------------------------------|-----------------------------------|
| A) To produce magnetic attraction | B) To achieve uniformity of scale |
| C) To damp the oscillations | D) To generate heat |

31. What is the full form of the abbreviation LBA in computer system?

- | | |
|--------------------------|----------------------------|
| A) Low block accessing | B) Large block accessing |
| C) Large boot addressing | D) Logical block accessing |

32. What is the name of the process to maintain the recommended level of electrolyte in lead-acid battery cell?

- | | |
|------------------------|----------------------|
| A) Cycling of the cell | B) Charging the cell |
| C) Recharging | D) Topping up |

33. Which device is a unipolar transistor?

- | | |
|---------|--------|
| A) IGBT | B) BJT |
| C) UJT | D) FET |

34. How the flux residue is removed after soldering a joint?

- | | |
|-----------------|----------------------|
| A) Organic flux | B) Isopropyl alcohol |
| C) Water | D) Petrol |

35. What is the advantage of MOSFET?

- | | |
|---|-----------------------------|
| A) Fast switching speed | B) Higher power gate signal |
| C) Low thermal ionisation of electron-holes | D) Slow switching speed |

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

- | | |
|--|---|
| A) Deflection is inversely proportional to current | B) Deflection is independent of current direction |
|--|---|

C) Weight of the soft iron pieces

D) Deflecting and controlling torques are

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

A) Silicon transistor needs low cut-in-voltage

B) Higher thermal stability

C) Complex design

D) Requires complicated bias arrangement

38. What is the advantage of PIN photo diodes?

A) Medium sensitivity in the infrared range

B) High sensitivity in the infrared range

C) Low sensitivity in the infrared range

D) Low sensitivity in the Ultraviolet range

39. What is the advantage of using digital multimeter?

A) Linear scale

B) Accuracy

C) Logarithmic scale

D) Easy portability

40. In which arrangement the high value of resistor is connected to extend the range of voltmeter?

A) Star

B) Series

C) Delta

D) Parallel

41. What is the use of schmitt trigger circuit?

A) AC to DC converter

B) AC to DC converter

C) Electronic thermostant

D) Voltage regulator

42. What is the typical forward voltage drop of the yellow colour LED?

A) 1.8 V

B) 2 V

C) 2.1 V

D) 2.2 V

43. Which meter uses a moving coil for measurement?

A) PMMC meter

B) MI repulsion type

C) MI attraction type

D) LCR meter

44. Which battery is used for cellular phones?

A) Zinc chloride

B) Sodium sulphur

C) Lithium ion

D) Nickel ion

45. What is the maximum forward gate current (I_g) for BFW10 JFET?

A) 10 mA

B) 20 mA

C) 5 mA

D) 8 mA

46. What is the function of opto-coupler in the switching operation of digital input signal?

A) Defects the operation of switching signal

B) Amplifier the signal

C) Produces electrical noise signal

D) Converts voltage into current

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

A) Resin

B) Mild acid

C) Organic acid

D) Rosin

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

A) Keeping the meter in vertical position

B) By replacing moving coil

C) By replacing moving coil

D) By replacing pointer

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

A) Aluminium frame

B) Ceramic frame

C) Steel frame

D) Wooden frame

50. What is the specified V_{cc} voltage of 4 bit digital switch with 4 independent lines?

A) 5.0 V to 7.5 V

B) 2.3 V to 3.6 V

C) 1.5 V to 2.2 V

D) 4.5 V to 5.5 V

51. What is the meaning of maximum safe reverse voltage across a diode?

A) Knee voltage

B) Reverse break down voltage

C) PIV voltage

D) Break down voltage

52. What is the natural shape of a quartz crystal?

A) Cube shape with pyramid at ends

B) Cylindrical shape with pyramid at ends

C) Hexagonal prism with pyramid at ends

D) Pentagonal prism with pyramid at ends

53. What is the advantage of IGBT?

A) It has low input impedance

B) High efficiency and fast switching

C) Low efficiency and slow switching

D) IGBT is a gate current driven device

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

A) Suitability for medium power applications

B) Higher driving power requirement

C) Low switching speed

D) Higher switching repetition rates

55. How many types of soldering is used for joining metal surfaces?

- A) Two
C) Four

- B) Three
D) Five

56. What is the maximum possible number of flip-flops in a decade counter?

- A) 3^n
C) 1^n
- B) 2^n
D) 2^{n+1}

57. Which component, which reads the command from memory and executes?

- A) Random Access Memory
C) Read Only Memory
- B) Graphics card
D) Processor

58. What will happen in SCR with forward biased condition and gate current is applied?

- A) Forward current conduction commences
C) Forward current conduction stops
- B) Reverse current turned off
D) Reverse current conduction commences

59. What is the name of the circuit that shifts the original signal in a vertical upward direction?

- A) Peak clipper circuit
C) Combination clipper circuit
- B) Positive clamping circuit
D) Negative clamping circuit

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

- A) Gives maximum distortion
C) Provides positive feedback
- B) Easily sets saturated
D) Never reach saturation

61. Rate of change of input voltage

- A) Rate of change of input voltage
C) Rate of change of output voltage
- B) Rate of change of output voltage
D) Rate of change of output frequency

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

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

63. What will happen when the forward bias voltage across the PN junction is increased excessively?

- A) Barrier width of junction increases
C) No current flows through the junction
- B) Increases the cut-in voltage
D) Junction ruptured and short circuited

64. Which method is used for blanketing with foam to

extinguish the fire?

- A) Smothering
C) Starving
- B) Cooling
D) Heating

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

- A) 100 Amp
C) 10 Amp
- B) 40 Amp
D) 1 Amp

66. How much time is required to make a quality soldered joint using soldering iron?

- A) 10 - 15 seconds
C) 7 - 10 seconds
- B) 15 - 20 seconds
D) 3 - 7 seconds

67. Which is the additional percentage of power delivered by the lithium Ion compared to NiMH battery?

- A) 0.15
C) 40%
- B) 60%
D) 25%

68. How the thick layers of oxide is removed before doing the soldering activity?

- A) Use Isopropyl Alcohol
C) Clean normally
- B) Use abrasive method
D) Apply flux

69. What is the power supply required to operate the most standard TTL ICs properly?

- A) + 7.5v to + 12V
C) + 4.75v to + 5.25V
- B) - 1.5v to - 2.5V
D) + 1.5v to +2.5V

70. What is the effect on the output voltage in a bridge rectifier circuits, with one diode open?

- A) Very low voltage
C) Half of the rated output voltage
- B) No output DC voltage
D) Full output rated voltage

71. What is the reason for the use of contactors in control circuits?

- A) To protect the load from arcing
C) Supply power to loads
- B) To increase load current
D) To decrease load current

72. Find the value of shunt resistance required for 1 mA meter to extend the range and measure 10 mA ($R_M = 27 \text{ Ohm}$) ?

- A) 1 Ohm
C) 4 Ohms
- B) 2 Ohms
D) 3 Ohms

73. What is the maximum forward gate current (I_g) for BFW10 JFET?

- A) 10 mA
B) 8 mA

C) 5 mA

D) 20 mA

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

A) Sulphuric acid

B) Zinc chloride

C) Potassium hydroxide solution

D) Alkaline solution

75. Where the programs and datas are stored after execution in computer?

A) Buffer

B) Processor

C) Memory

D) Chip set

76. What is the unit of electric charge?

A) Hertz

B) Coulomb

C) Ampere

D) Volts

77. Which insulation layer is used in MOSFET?

A) Arsenic material

B) Germanium material

C) Antimony material

D) Silicon-di-oxide

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

A) Directly proportional

B) Drops more voltage across it

C) Inversely proportional

D) Wire gets less heat

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

A) Opposes more current

B) Resistance increases

C) More voltage dropped

D) Allows high current flow

80. Which unit is used to measure capacitance value?

A) Henry

B) Farad

C) Ohm

D) Mho

81. What is the common and popular application of U.J.T?

A) Multivibrator

B) Motor speed controller

C) Relaxation oscillator

D) Voltage regulator

82. How many time constant period is required to fully charge a capacitor?

A) 10 time constants

B) 7 time constants

C) 5 time constants

D) 3 time constants

83. Which energy is converted by the battery to produce electricity?

A) Electrical energy into mechanical energy

B) Chemical energy into electrical energy

C) Mechanical energy into electrical energy

D) Electrical energy into light energy

84. Which type of voltage regulator is IC 723?

A) Three pin negative voltage regulator

B) Three pin positive voltage regulator

C) Three pin adjustable voltage regulator

D) Multipin variable voltage regulator

85. How many inputs are available in the 7447 BCD-to-seven segment decoder used to drive the LED display?

A) Four

B) One

C) Seven

D) Eight

86. What is the efficiency of transformer coupled class A amplifier?

A) More than 60%

B) About 50%

C) Less than 20%

D) Unity

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

A) Constant current charging method

B) Float charging method

C) Trickle charging method

D) Constant voltage charging method

88. At which condition the cold resistance of the low voltage lamp is measured using ohmmeter?

A) Lamp is ON at 320 Degree Centigrade

B) Lamp is ON at 400 Degree Centigrade

C) Lamp is ON at 100 Degree Centigrade

D) Lamp is OFF at room temperature

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

A) Graphics card

B) System unit

C) Micro processor

D) Memory

90. What is the first step to rescue the person in electrical contact?

A) Pull the person from electrical contact

B) Switch OFF power supply

C) Break the contact

D) Call the doctor

91. What is the effect of shaking the soldered joint while cooling?

A) It will corrode the joint

B) Flux will not dissolve

C) It results in oxidation of solder

D) It disturbs the chemical bonding take place

92. What is the full form of the abbreviation ISA?

A) Institution Standard Architecture

B) Industry System Architecture

C) Industry Software Architecture

D) Industry Standard Architecture

93. Which component is used to prevent over voltage of AC supply in SMPS?

- A) Carbon film resistor
- B) Wire wound resistor
- C) Metal oxide varistor
- D) Metal film resistor

94. What is the maximum power dissipation Pmax for BF 245B?

- A) 100 mw
- B) 300 mw
- C) 200 mw
- D) 400 mw

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

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

96. Which measuring instrument is used to make quick test on a TRIAC?

- A) Oscilloscope
- B) Voltmeter
- C) Ammeter
- D) Ohmmeter

97. How is the soldering method used for joining large metal called?

- A) Brazing
- B) Welding
- C) Soft soldering
- D) Hot soldering

98. Which is the combination of photo transistor?

- A) Photo transistor and DIAC
- B) Photo diode and transistor
- C) Photo resistor and TRIAC
- D) LASER diode and pin diode

99. What type of ripple filter circuit is used for large load current requirements?

- A) Capacitor Input filter
- B) LC filter
- C) Inductor Input filter
- D) RC filter

100. Which part of the relay causes most trouble?

- A) Hinges
- B) Relay contacts
- C) Relay coil
- D) Frame and core

101. Which is the device made and interconnected by two transistors?

- A) UJT
- B) FET
- C) LED
- D) SCR

102. What is the output frequency of the pulsating DC in a two diode fullwave rectifier?

- A) Same frequency of the A/C input
- B) Three times the input A/C frequency
- C) Half of the input A/C frequency
- D) Double the input A/C frequency

103. What type of feed back is used by the Wein-bridge oscillator to oscillate the signal?

- A) No feedback
- B) Positive feedback
- C) Negative feedback
- D) Both positive and negative feedback

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

- A) Decrease voltage rating
- B) Protection against weather
- C) Reduce current flow
- D) Increase current flow

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

- A) Slower in operations
- B) No moving parts to wear and tear
- C) Spark generated during switching
- D) Bulky profile

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

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

107. Which circuit photo SCR opto couplers are used?

- A) Counter circuits
- B) DC circuits
- C) AC powered circuits
- D) Amplifier circuits

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

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

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

- A) 10 to 60 nano seconds
- B) 1 to 100 nano seconds
- C) 1 to 100 milli seconds
- D) 1 to 25 nano seconds

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

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

111. Which is the transistor used to operate the Colpitts oscillator?

- A) AC 188
- B) AC 127
- C) BC 148B
- D) BF 194B

112. What is the purpose of using IC74LS190?

- A) Comparator
- B) Attemnator
- C) Modulator
- D) Up/down counter

113. Which is the N - channel FET?

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

114. Which port is used to connect the HDD on the mother board?

- | | |
|----------------------|---------------|
| A) Floppy drive port | B) Com 2 port |
| C) Com 1 port | D) IDE port |

115. How batteries are classified based on their working?

- | | |
|--|--------------------------------------|
| A) Cylindrical cells and rectangular cells | B) Button cells and lithium cells |
| C) Dry cells and alkaline cells | D) Primary cells and secondary cells |

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

- | | |
|-----------------|----------------------|
| A) Re-alignment | B) Range test |
| C) Calibration | D) Testing standards |

117. What is the power dissipated if 10mA current flows through a 10K Ohm resistor?

- | | |
|---------------------|---------------------|
| A) 3000 milli watts | B) 4000 milli watts |
| C) 2000 milli watts | D) 1000 milli watts |

118. What is the purpose of wood rasp file?

- | | |
|-------------------------|---------------------------|
| A) Finishing flat edges | B) Preliminary rough work |
| C) 90 Degree corners | D) Cutting metals |

119. Electrical conductivity of gold is

- | | |
|--------|---------|
| A) 94% | B) 100% |
| C) 56% | D) 67% |

120. What is the input impedance of IGBT?

- | | |
|-----------------------------|---------------------------|
| A) Infinity input impedance | B) Medium input impedance |
| C) High input impedance | D) Low input impedance |

121. Which circuit is determined by the frequency of LC tank circuit?

- | | |
|----------------|----------------|
| A) Amplifier | B) Oscillator |
| C) Demodulator | D) Multiplexed |

122. Which circuits commonly use parallel-fed Hartley oscillators?

- | | |
|-------------------------|----------------------------------|
| A) Stereo amplifiers | B) Radio receivers |
| C) Television receivers | D) Automatic voltage stabilizers |

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

- | | |
|---------------|---------------|
| A) 20 mW/gate | B) 5 mW/gate |
| C) 15 mW/gate | D) 10 mW/gate |

124. Which device is a unipolar transistor?

- | | |
|---------|--------|
| A) BJT | B) FET |
| C) IGBT | D) UJT |

125. What is the main application of photo resistor?

- | | |
|--|-----------------------------|
| A) Demodulation purpose | B) To generate oscillations |
| C) Controls of street lighting systems | D) Voltage rectification |

126. What is the percentage of conductivity of electric current in copper?

- | | |
|---------|---------|
| A) 0.56 | B) 1 |
| C) 0.67 | D) 0.94 |

127. What is the load current handled by the solid state relay that must be mounted to some heatsink to protect the device?

- | | |
|----------|-----------------------|
| A) 2 Amp | B) Greater than 4 Amp |
| C) 1 Amp | D) 3 Amp |

128. What is the maximum drain- source voltage, VDS for the JFET BF 245B?

- | | |
|---------|---------|
| A) 10 V | B) 40 V |
| C) 20 V | D) 30 V |

129. Which space is used to design circuit in schematic editor of the Tina software?

- | | |
|----------------------------|--------------------------|
| A) Components groups space | B) Components type space |
| C) Circuit work space | D) File operation space |

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

- | | |
|------------------------------|--------------------|
| A) Physical and sensory test | B) Mechanical test |
| C) Chemical test | D) Thermal test |

131. How the sensitivity of voltmeter is determined?

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

132. Which property of the capacitor stores electrical energy in electrostatic field?

- | | |
|----------------------|-------------------------|
| A) Capacitance | B) Dielectric |
| C) Stray capacitance | D) Capacitive reactance |

133. Which cores are used in intermediate frequency transformers?

- A) Ferrite
- B) Cobalt
- C) Nickel
- D) Steel

134. How the overlapping of excess sheet metal causing bulge at seam and edge is prevented?

- A) Mallet
- B) Square stake
- C) Notches
- D) L - angles

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

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

136. Which circuit uses the F to V converter section?

- A) Digital frequency meter circuit
- B) Digital frequency meter circuit
- C) Up/down counter circuit
- D) Schmitt trigger circuit

137. Which is electronic simulation software?

- A) Photoshop
- B) Macspice
- C) MS Office
- D) AutoCAD

138. Which material is used to make photo resistors (LDR)?

- A) Cadmium sulfide
- B) Germanium
- C) Silicon
- D) Aluminium

139. Which is the maximum size of drill bit used in electrical hand drilling machine?

- A) 0.35 mm
- B) 1.5 mm
- C) 6.5 mm
- D) 3.5 mm

140. Which electrode controls brightness of the image on the screen of oscilloscope?

- A) Control grid
- B) Anode
- C) Focussing electrode
- D) Cathode

141. What is the voltage gain in a transistor if the input voltage in 40mv and the output voltage in 3.6V?

- A) 180
- B) 90
- C) 270
- D) 45

142. What is the process of adding impurities to a pure semi conductor material?

- A) Forming
- B) Diffusion
- C) Doping
- D) Etching

143. What is the overall base emitter voltage required to turn the darlington pair?

- A) 0.3 V
- B) 0.2 V
- C) 0.7 V
- D) 1.4 V

144. 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) 3.567 v
- B) 0.213 v
- C) 1.525 v
- D) 2.134 v

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

- A) The need of bulky transformer
- B) Each diode carries half the load current
- C) The ripple frequency is higher
- D) DC output level is higher

146. What should be the time constant $t = RC$ for a good clamper circuit with reference to time period of the input signal?

- A) RC values should be at least ten times
- B) Double the time of signal frequency
- C) Half the time period of signal
- D) Five times the time period of signal

147. Which electrolyte is used in maintenance free lead acid batteries?

- A) Sodium electrolyte
- B) Ceramic electrolyte
- C) Gelled electrolyte
- D) Potassium electrolyte

148. Which tool is used for seaming the funnel like taper?

- A) Hatchet stake
- B) Vices
- C) Angle steel
- D) Blow horn stake

149. What is the name of the ratio of ON-time pulse to the OFF-time pulse of multivibrator?

- A) Control voltage
- B) Threshold comparator
- C) Pulse repetition
- D) Pulse repetition

150. What is the maximum drain - source voltage, VDS for BFW10?

- A) 30 V
- B) 20 V
- C) 40 V
- D) 50 V

151. Which IC is used for (DEMUX) function in data transmission?

- A) 74 LS 138
- B) 74 LS 151
- C) IC 7483
- D) IC 7486

152. Which parameter of passive component can be calculated using the formula ?

- A) Inductance
- B) Inductive reactance

C) Capacitance	D) Capacitive reactance
153. How the gas and liquefied gases are classified	
A) Class D fire	B) Class C fire
C) Class A fire	D) Class B fire
154. Which electrical parameter opposes the flow of electrons?	
A) Resistance	B) Power
C) Voltage	D) Current
155. 6 What is the input impedance of IGBT?	
A) Low	B) Unity
C) High	D) Infinity
156. What is the unit of inductance?	
A) Henry	B) Watts
C) Joule	D) Farad
157. What is the full form of the abbreviation PMMC meter?	
A) Parallel Magnet Moving Coil meter	B) Principle Magnet Moving Coil meter
C) Permanent Magnet Moving Coil meter	D) Position Magnet Moving Coil meter
158. What is the gate current (I_g) of the JFET, when reverse biased?	
A) Practically zero	B) Practically very low
C) Practically infinity	D) Practically unity
159. Which instrument used to measure resistance, capacitance and inductance?	
A) Kelvin bridge	B) Wheatstone bridge
C) Wein bridge	D) LCR bridge
160. Which memory device loses data on power failure?	
A) Hard disc	B) RAM
C) ROM	D) CD ROM
161. What is the name of the motion of charged particles in any medium?	
A) Resistance	B) Voltage
C) Frequency	D) Current
162. What is the purpose of flux in soldering electronic circuit components?	
A) Form the oxide layer	B) Dissolve the oxide layer on the metal surface
C) Reduce the solder cooling time	D) Increase the melting temperature of solder

163. Which material is used as electrical insulator?	
A) Porcelain	B) Aluminium
C) Germanium	D) Gallium
164. Which function control in CRO, adjust the trace sharper?	
A) Intensity	B) Focus
C) Amplitude (V/Div)	D) Time/Div trigger
165. Why LC tuned circuits are not used in audio frequency oscillators?	
A) LC tank circuit does not produce AF signals	B) LC components are not available
C) LC values required is too large	D) LC tank circuit operation requires high voltage
166. How the performance of the amplifier designed using the simulation software is tested?	
A) Using test and measuring equipments	B) Using virtual instrumentation testing
C) Using multimeter	D) Using measuring equipments
167. Find the total resistance value of 10 ohms and 20 ohms connected in parallel.	
A) 6666 Ohms	B) 66.66 Ohms
C) 666.6 Ohms	D) 6.666 Ohms
168. What is the minimum current ratings of solid state relays available in low power packages?	
A) 50 milli Ampere	B) 100 milli Ampere
C) Few micro Amperes	D) 10 milli Ampere
169. Where does the depletion region exists in a bipolar transistor?	
A) Between collector and emitter electrodes	B) Between collector - base electrodes
C) Between E-B and B-C electrodes	D) Between emitter - base electrodes
170. What is the colour of positive electrode in fully charged lead acid battery?	
A) Grey colour	B) Red colour
C) Spongy grey colour	D) Reddish brown
171. What is the use of screw driver?	
A) Tighten or loosen screws	B) Tighten or loosen bolts
C) Tighten or loosen rivets	D) Hold the screws
172. What is the advantage of MOSFET?	
A) Very low on-state voltage	B) Superior current conduction capability

C) Low driving power	D) Low gate signal power requirements
173. What is the cause of burnt relay contacts?	
A) Excessive contact current	B) Excessive number of operations
C) Low contact current	D) Chatter during a slow release
174. Which is the 3 terminal, negative voltage regulator IC?	
A) LM 340	B) IC 7905
C) IC 7812	D) LM 320
175. Which electrical quantity is directly proportional to the current carrying capacity of the conductor?	
A) Conductor s shape	B) Wire resistance
C) Conductor s diameter	D) Passing current
176. What is the reason for electric fire?	
A) Overloading	B) Open circuit
C) Deviation	D) Proper earthing
177. Which software is used to simulate electronic circuits?	
A) Auto cad	B) MS office
C) Multi sim	D) Photo shop
178. How the lamp failures caused by the high inrush currents in lamp dimmer circuits using TRIAC is eliminated?	
A) Using Safety resistor	B) Using MCB
C) By soft start circuit	D) By the fuse
179. What is the specific gravity of concentrated sulphuric acid?	
A) 1.175	B) 1.945
C) 1.245	D) 1.835
180. Which fire extinguisher is used to put off class A type of fire?	
A) Foam type	B) Jet of water
C) Dry powdered	D) Carbon-di-oxide
181. Which signal is sent by the SMPS to computer mother board?	
A) Processor signal	B) Device signal
C) Peripheral signal	D) Power good signal
182. Which current flows in TRIAC between MT1 and MT2?	
A) Principal current	B) Leakage current
C) Conventional current	D) Reverse current

183. Which circuit uses photo-darlington devices?	
A) Counter circuits	B) Amplifier circuits
C) DC circuits	D) AC powered circuits
184. What is the unit of electric charge?	
A) Coulomb	B) Hertz
C) Volts	D) Ampere
185. Which meter movement is not affected by stray magnetic fields?	
A) Thermo couple meter	B) MI meter - attraction type
C) PMMC meter	D) MI meter - Repulsion type
186. Which characteristics exhibits the current conduction increases while the voltage across the devices decreases in a DIAC?	
A) Negative resistance characteristics	B) Linearity characteristics
C) Positive resistance characteristics	D) Nonlinearity characteristics
187. What is the rated voltage of a single cell in lead acid battery?	
A) 12 V	B) 2.0 V
C) 2.2 V	D) 1.5 V
188. What is the minimum current ratings of solid state relays available in low power packages?	
A) 10 milli Ampere	B) 100 milli Ampere
C) Few micro Amperes	D) 50 milli Ampere
189. Which metal coating is used on compact disk?	
A) Aluminium	B) Nickel
C) Chromium	D) Silver
190. What is the full form of electronic component MOV?	
A) Metal Oxide Varistor	B) Metal Over Varistor
C) Metal Oxide Varactor	D) Metal Over Varactor
191. What is the full form of the abbreviation MOSFET?	
A) Metal organic serial FET	B) Minimum output signal FET
C) Medium oscillator signal FET	D) Metal oxide semiconductor FET
192. How the maximum permissible voltage that can be applied across the collector ? Emitter junction of a transistor is indicated?	
A) VCC in volts	B) VCB (max) in volts
C) VCE (max) in volts	D) VBE (max) in volts

193. What will happen if the photo resistor (LDR) is exposed to low level light condition?

- A) Resistance will increase to 1 Kilo Ohm
- B) Resistance will increase to around 1 Mega Ohm
- C) Resistance will decrease to 100 Ohm
- D) Resistance will decrease to 10 Ohm

194. What is the electrolyte level maintained above the top of the plates in lead acid battery cells?

- A) 2 mm to 4 mm
- B) 16 mm to 25 mm
- C) 10 mm to 15 mm
- D) 5 mm to 8 mm

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

- A) Common collector configuration
- B) Common drain amplifier configuration
- C) Common emitter configuration
- D) Common base configuration

196. What is the package type for BF 245B?

- A) TO-82
- B) TO-72
- C) TO-102
- D) TO-92

197. Which type of clipper is that a small portion of the negative half cycle of signal is removed?

- A) Biased negative clipper
- B) Combination clipper
- C) Biased positive clipper
- D) Positive clamper

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

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

199. Which purpose the cadmium sulfide cells (CDS cells) are used?

- A) Voltage dependent resistor
- B) Primary cells
- C) Rechargeable cells
- D) Light dependent resistor

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

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

201. Which material is used to make LDR for higher end requirements?

- A) Copper sulfide
- B) Lead selenide
- C) Cadmium sulfide
- D) Zinc sulfide

202. What is the lowest voltage level of discharging the lead-acid battery?

- A) 1.85 V
- B) 1.7 V
- C) 1.2 V
- D) 1.5 V

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

- A) Modem
- B) Speaker
- C) Printer
- D) Monitor

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

- A) 2A
- B) 3A
- C) 5A
- D) 4A

205. Which battery is made from non-toxic materials?

- A) Nickel metal hydride (NiMH)
- B) Lithium polymer (Li-Poly)
- C) Nickel cadmium (Nicaid)
- D) Lithium ion (Li-Ion)

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

- A) Induction
- B) Mutual induction
- C) Coupling
- D) Self induction

207. Which electronic device inversely changes its resistance with the amount of light falling on it?

- A) Photo diodes
- B) Photo transistors
- C) Photo resistors
- D) Photo voltaic cells

208. Which option opens a list of programs, currently installed in the computer?

- A) Start menu
- B) Help menu
- C) All program
- D) Recent documents

209. What is the output produced in the ADC circuit?

- A) Triangular wave output
- B) Triangular wave output
- C) Sinewave output
- D) Analog output

210. What is the minimum current rating of four diode bridge rectifier to supply load current of 1.8 Amp?

- A) 1.8 Amp
- B) 5.0 Amp
- C) 2.0 Amp
- D) 0.9 Amp

211. How the electrical quantity measured by the meter is marked in it?

- A) Using colour codes
- B) Directly printing the specifications
- C) Printing the values
- D) Printing the values

212. How many time constants required to change a capacitor to 63.2% of its full charge voltage?

- A) Two time constant B) Four time constant
C) Three time constant D) One time constant

213. What is the resonant frequency range of a crystal?

- A) Between 0.5 and 30 MHz B) Between 0.5 and 25 MHz
C) Between 0.1 and 1MHz D) Between 0.1 and 10 MHz

214. What is the digital signal value for the analog signal value 6V?

- A) 110 B) 111
C) 101 D) 100

215. Which process the ICS are made?

- A) Micro photo - lithographic process B) Point contact junction process
C) Point contact junction process D) Grown junction process

216. How the insulation coating stays without damage, even on bending the wire?

- A) Due to wire resistance B) Due to the strength of the wire material
C) Due to high current flow D) Due to elastic property of insulation

217. What is the meaning of first letter indicated in the transistor code number BC 107?

- A) Antimony material used B) Germanium material used
C) Silicon material used D) Indium material used

218. Which class of amplifier uses fixed bias because of its imperent advantage of transistor will never go to saturation?

- A) Class - A B) Class - C
C) Class - AB D) Class - B

219. What is the decimal conversion number for the octal number (2374)₈?

- A) (1296)₁₀ B) (1286)₁₀
C) (1276)₁₀ D) (1266)₁₀

220. What is the type of transistor BPX81?

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

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

- A) 1.8 V B) 2 V
C) 2.2 V D) 2.1 V

222. How can you confirm a transistor as defective?

- A) By voltage measurements B) By circuit testing
C) By physical testing D) By ohm meter testing

223. What is the expansion of PRF related to frequency?

- A) Pulse repetition frequency B) Pulse repetition frequency
C) Power regulated frequency D) Pulse probability frequency

224. What are the basic components required for a clipping circuit?

- A) Transistor and diode B) Diode and capacitor
C) Capacitor and resistor D) Diode and resistor

225. At which temperature the 6040 solder start meeting?

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

226. In which analog meter the battery is provided?

- A) Watt meter B) Ammeter
C) Voltmeter D) Ohm meter

227. What is the common and popular application of U.J.T?

- A) Multivibrator B) Voltage regulator
C) Relaxation oscillator D) Motor speed controller

228. Which mouse action is used to move an object from one location to another?

- A) Double clicking B) Drag and drop
C) Left clicking D) Right clicking

229. What is the percentage of conductivity of electric current in silver?

- A) 0.56 B) 0.67
C) 1 D) 0.94

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

- A) Compact Disk Read Only Memory B) Classified Device Read Only Memory
C) Computer Disk Read Only Memory D) Connectivity Digital Read Only Memory

231. What is the effect on the transformer operated below the rated voltage?

- A) Delivers reduced secondary voltage B) Burn out windings
C) Transformer heated up excessively D) Leads to interwinding leakage

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

- A) Measure voltage B) Measure current
C) Measure insulation of wire D) Measure diameter of wire

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

- A) Electron from drain to source B) Electron from source to drain
C) Electron from gate to source D) Electron from drain to gate

234. In which quantity affects the Q point of a transistor amplifier?

- A) Mismatching signals B) Proper biasing methods
C) Decreased temperature D) Increased temperature

235. What is characteristics of instrumentation amplifier?

- A) High input impedance B) High input impedance
C) Low input impedance D) Infinity output impedance

236. Which factor determines the inductance value?

- A) Diameter of the coil B) Current flow through the coil
C) Frequency of the current D) Material of the coil

237. Which condition the mechanical zero error occur in panel meters?

- A) At voltage connected condition B) At load connected condition
C) At load connected condition D) At normal condition

238. Find the total inductance value of two inductors 10H and 15H of connected in series.

- A) 15 H B) 25 H
C) 10 H D) 05 H

239. Which material contains eight electrons in valency layer?

- A) Intrinsic semiconductors B) Semiconductors
C) Conductors D) Insulators

240. Which material is used for making instrument cabinets?

- A) Wood B) Sheet metal
C) Plastic D) Hard rubber

241. How the drive circuits for the power MOSFETs are coupled?

- A) Using transistors B) Direct coupling method
C) Using pulse transformer D) Using logic circuitry

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

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

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

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

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

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

245. How many operational amplifiers are fabricated in the LM741 IC?

- A) One Op-Amp B) Two Op-Amps
C) Two Op-Amps D) Four Op-Amps

246. How to overcome the problem of frequency drift in LC oscillators?

- A) Apply opposite polarity of signal B) Increase the supply voltage
C) Using high Q coils and good quality capacitors D) Provide negative feedback

247. How many alternating layers are there in IGBT?

- A) Single layer B) 3 layers
C) 4 layers D) 2 layers

248. What is the use of flip - flop?

- A) It stores current B) It stores voltage
C) It stores binary information D) It stores energy

249. What is the name of Multi-turn potentiometers?

- A) Single turn trim pots B) Single turn dual pots
C) Multi turn dual pots D) Multi turn trim pots

250. Which band of frequency is used for RADAR in frequency spectrum allotted by the International Telecommunication Union (ITU)?

- A) ITU band - 8 B) ITU band - 6
C) ITU band - 4 D) ITU band - 10

251. What is the code number of TRIAC?

- A) 2N1597 B) 2N2646
C) BT136 D) BFW10

252. What is the term stands for TRIAC?

- A) Triode Alternate control B) Triode AC semiconductor
C) Triode Access console D) Triode DC semiconductor

- A) Medium B) Low
C) High D) Very high

253. Which component is used to remove the heat generated inside the SMPS?

- A) Heat sink B) Mica film spacer
C) Cooler fan D) Silicon grease

264. How the movement of electrons through a conductor in a particular direction is called?

- A) Resistance B) Conductance
C) Electric current D) Inductance

254. What is the shape of mandatory signs?

- A) Circular B) Rectangular
C) Square D) Triangular

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

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

255. Which type of soldering is used for electronic circuit?

- A) Hot soldering B) Brazing
C) Soft soldering D) Hard soldering

266. What is the maximum specified voltage for the TRIAC TIC 201D?

- A) 1.7 V B) 1.5 V
C) 2.5 V D) 2.1 V

256. Which electrical property opposes the flow of electrons?

- A) Voltage B) Power
C) Current D) Resistance

267. Which formula is used to find the conductance?

- A) $I \times R$ B) V / I
C) I / V D) Q / V

257. What is the cause of injuring at the time of lifting a load?

- A) Object striting the load B) Falling object
C) Heavy load D) Wrong lifting technique

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

- A) Change codes B) Permanent codes
C) Partial change codes D) Temporary codes

258. What is the advantage of IGBT?

- A) Low driving power B) Low gate signal power
C) Used to isolate logic circuits D) Fast switching speed

269. Which angle is checked by the try square?

- A) 90 Degree B) 75 Degree
C) 60 Degree D) 45 Degree

259. Which measuring instrument is used to check the working condition of a photo resistor (LDR)?

- A) Ohmmeter B) Ammeter
C) Voltmeter D) Oscilloscope

270. Which material is used to make LDR for lower end requirements?

- A) Copper sulfide B) Zinc sulfide
C) Aluminium sulfide D) Cadmium sulfide

260. How gate is biased in JFET?

- A) AC supply function B) Dual supply function
C) Forward biased D) Reverse biased

271. What is stationary electric charges?

- A) Electrical charges B) Static charges
C) Kinetic charges D) Chemical charges

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

- A) Pin number 5 B) Pin number 5
C) Pin number 3 D) Pin number 6

272. Which type of amplifier in used to operate the loud speaker?

- A) Power amplifier B) IF amplifier
C) Voltage amplifier D) RF amplifier

262. What is the output pulse frequency of the full wave rectifier with input frequency of 50 Hz?

- A) 200 Hz B) 40 Hz
C) 60 Hz D) 100 Hz

273. How the accuracy of amplitude and frequency measured by CRO is checked?

- A) By function generator B) By complex wave form
C) By sine wave signal D) By built-in calibration signal

263. What is the current gain of common collector amplifier?

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

- A) 0.632
- B) 0.5
- C) 0.4
- D) 0.864

275. The speed of spindle motor rotates inside the hard disk

- A) 3600 to 7200 r.p.m
- B) 3500 to 6000 r.p.m
- C) 2500 to 5000 r.p.m
- D) 4000 to 800 r.p.m

276. How the negative feedback is called?

- A) Current controlled feedback
- B) Regenerative feedback
- C) Voltage controlled feedback
- D) Degenerative feedback

277. Which circuit is used to clip portion of both positive and negative half cycle of input signal voltage?

- A) Unbiased clipper circuit
- B) Biased positive clipper circuit
- C) Combination clipper circuit
- D) Biased negative clipper circuit

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

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

279. Which parameter controls the current flow in a BI-polar transistor?

- A) Frequency
- B) Current
- C) Voltage
- D) Resistance

280. Which component filter the ripples in the rectifier circuit?

- A) Diode
- B) TRIAC
- C) DIAC
- D) Capacitor

281. Which parameter is measured by a multimeter?

- A) Time duration
- B) Frequency
- C) Energy
- D) Voltage

282. Which type of transistors are required to amplify signals from the microphone /transducer?

- A) Epitaxial versa watt transistors
- B) High power transistors
- C) Medium power transistors
- D) Low power transistors

283. How the light sensitive photo transistor enclosed inside a tight package is activated?

- A) By the light sensitive receiver inside
- B) By the external signal to the transistor

C) By IR light produced inside the package

D) By the bias voltage to the photo transistor

284. What is the rated output voltage of a silver oxide cell?

- A) 1.0 VDC
- B) 2.5 VDC
- C) 4.0 VDC
- D) 1.5 VDC

285. When does the complementary metal oxide type MOSFET configuration consumes power?

- A) Always consumes power
- B) Never consumes power
- C) During switching
- D) While it holds its state

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

- A) Five gauge sizes increased
- B) Two gauge sizes decreased
- C) Three gauge sizes decreased
- D) Four gauge sizes increased

287. Which type of toe caps are used to avoid crushing of feet at the time of shifting equipments?

- A) Steel toe caps
- B) Plastic toe caps
- C) Leather toe caps
- D) Rubber toe caps

288. What is produced by the power supply connected soldering iron?

- A) Cool air
- B) Fire
- C) Water vapour
- D) Heat

289. How the active and passive components are added in the circuit using simulation software?

- A) Copy and paste from similar circuit
- B) Clicking on the list of components
- C) Clicking on the component group
- D) Clicking from the similar circuit

290. Which is the N - channel FET?

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

291. How the single strand wire is called?

- A) Twisted wire
- B) Flexible wire
- C) Multistrand wire
- D) Hook - up wire

292. What is the purpose of using positive feed back in amplifiers?

- A) To produce modulation
- B) To produce multiplexion
- C) To produce oscillation
- D) To produce demodulation

293. What is the main advantages of IGBT over BJT?

- | | |
|--|---|
| A) Fast switching speed | B) Reverse bias secondary break downs |
| C) Thermal limits are pushed to the edge | D) Superior current conduction capability |

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

- | | |
|--------------------------------------|--|
| A) Voltage across zener reached 0.3V | B) Voltage across it reached the zener voltage |
| C) When bias voltage reached 0.7V | D) After the barrier voltage cancelled |

295. What is the function of pin number 4 of the IC 555?

- | | |
|----------|--------------|
| A) Reset | B) Reset |
| C) Set | D) Threshold |

296. Which step is important for soldering a joint?

- | | |
|-----------------------|----------------------|
| A) Cleaning the joint | B) Cooling the joint |
| C) Heating the joint | D) Pasting the joint |

297. Why the plunger desoldering tool needs periodical cleaning?

- | | |
|--|--------------------------------------|
| A) To remove the flux collected in chamber | B) To help the joint to be soldered |
| C) To melt the solder quickly | D) To prevent clogging of the nozzle |

298. What is the package type for BF 245B?

- | | |
|-----------|----------|
| A) TO-82 | B) TO-72 |
| C) TO-102 | D) TO-92 |

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

- | | |
|---------------|-----------------|
| A) Inverting | B) Demodulating |
| C) Amplifying | D) Rectifying |

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

- | | |
|----------|----------|
| A) 1.8 V | B) 2.2 V |
| C) 2 V | D) 2.1 V |

301. How much is the maximum load current of the negative voltage regulator IC 7912?

- | | |
|----------|-----------|
| A) 1.0 A | B) 0.55 A |
| C) 2.0 A | D) 1.5 A |

302. Which tool works on the principle of air suction?

- | | |
|----------------------|-------------------|
| A) Desoldering braid | B) Soldering wick |
| C) Desoldering pump | D) Soldering iron |

303. Which voltage level is reached to increase the current through DIAC rapidly?

- | | |
|-----------------------|-------------------|
| A) Break over voltage | B) Cut in voltage |
| C) Break down voltage | D) Zener voltage |

304. What is the function of pin number 2 of IC 555 timer circuit?

- | | |
|------------|------------|
| A) Reset | B) Trigger |
| C) Trigger | D) "+VCC" |

305. What is the drawback of IGBT compared to the power MOSFET?

- | | |
|---------------------------------------|--|
| A) Poor current conduction capability | B) Not suitable for power applications |
| C) Higher driving power requirement | D) Poor switching speed |

306. What is the input impedance of darlington pair transistors?

- | | |
|---------------------------|------------------------------|
| A) Medium input impedance | B) Very low input impedance |
| C) Uniter | D) Very high input impedance |

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

- | | |
|-----------------------------|--------------------------|
| A) More sparking | B) Tendency to fail open |
| C) Tendency to fail shorted | D) Intermittent working |

308. Which circuit uses the enhancement type MOSFET?

- | | |
|--------------------------------------|--------------------------------------|
| A) High power amplifier circuits | B) Low power oscillator circuits |
| C) Integrated MOS switching circuits | D) High frequency switching circuits |

309. How to improve the frequency stability in oscillator circuits?

- | | |
|-------------------------------------|--------------------------------|
| A) Using L and C | B) By using quartz crystal |
| C) Improve the property of circuits | D) Increase the supply voltage |

310. Which port is used to connect a plug and play peripheral device to CPU?

- | | |
|---------------|---------------|
| A) COM 2 port | B) COM 1 port |
| C) USB port | D) RJ45 port |

311. What is the effect on a secondary cell supplying current to the load?

- | | |
|----------------|--------------|
| A) Charging | B) Leaking |
| C) Discharging | D) Unloading |

312. How power rating is specified for transformers?

- | | |
|--------------|---------------------|
| A) Watts (W) | B) Horse power (HP) |
|--------------|---------------------|

C) Volt ampere (VA) D) Voltage (V)

313. What is the decimal number for the binary number 0101?

- A) 5 B) 4
C) 7 D) 6

314. What is the name of the circuit that shifts the original signal in a vertical downward direction?

- A) Peak clipper circuit B) Combination clipper circuit
C) Negative clamping circuit D) Positive clamping circuit

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

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

316. How batteries are classified?

- A) Primary cells and secondary cells B) Cylindrical cells and rectangular cells
C) Dry cells and alkaline cells D) Button cells and lithium cells

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

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

318. Which value is equal to one picofarad?

- A) 10-12 Farad B) 1012 Farad
C) 106 Farad D) 10-6 Farad

319. Which material conducts electricity?

- A) Copper B) Paper
C) Mica D) Glass

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

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

321. What type of arrangement is required to sustain the oscillations of the oscillator circuit?

- A) Increase the bias voltage B) Increase the value of inductor
C) Provide regenerative feedback D) Provide negative feedback

322. Which fire extinguisher is used to put off class C type of fire?

- A) Foam type B) Dry powdered
C) Jet of water D) Carbon-di-oxide

323. What is the term stands for TRIAC?

- A) Triode Access console B) Triode DC semiconductor
C) Triode AC semiconductor D) Triode Alternate control

324. Which rechargeable cell is designed with conductive polymer?

- A) Gelled electrolyte lead acid cell B) Lead acid cell
C) Nickel metal hydride cell D) Plastic cell

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

- A) UJYs and FETs B) Thyristor and transistors
C) Diodes and transistors D) MOSFETs and IGBTs

326. What is the range of current rating of lead acid batteries used in automobiles?

- A) 10 to 25 Amp B) 5 to 10 Amp
C) 2.5 to 4.5 Amp D) 100 to 400 Amp

327. What is successive approximation (SAR)?

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

328. Which metal has very good conductivity to the electric current?

- A) Copper B) Gold
C) Aluminium D) Silver

329. Which step is followed for treating a person from electric shock?

- A) Cover the victim with a coat B) Provide water
C) Move the victim to a ventilated place D) Keep the victim cold

330. How does the values of bias resistors selected for collector current in class -B amplifiers?

- A) Q point set slightly below cut-off B) Quiescent current over the cut-off value
C) Quiescent current at mid point D) Quiescent current beyond the cut-off point

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

- | | |
|----------------------------------|------------------------|
| A) Muscles contact | B) Fibrillation |
| C) Unpleasant tingling sensation | D) Burning of the skin |

332. What is the function of clipper circuit?

- | | |
|------------------|------------------|
| A) Rectification | B) Amplification |
| C) Regulation | D) Wave shaping |

333. What is the maximum drain- source voltage, VDS for the JFET BF 245B?

- | | |
|---------|---------|
| A) 20 V | B) 40 V |
| C) 30 V | D) 10 V |

334. Which energy is converted into electrical energy in hydropower stations?

- | | |
|-----------------|----------------------|
| A) Heat energy | B) Mechanical energy |
| C) Light energy | D) Chemical energy |

335. What is the formula used to calculate the current gain (alpha) of common base amplifier?

- | | |
|----------------|----------------|
| A) I_C / I_E | B) I_E / I_C |
| C) I_E / I_C | D) I_B / I_E |

336. What is the maximum blocking voltage of very high current handling IGBT modules?

- | | |
|-----------|-----------|
| A) 6000 V | B) 5000 V |
| C) 1000 V | D) 440 V |

337. Which device generates high frequency radio frequency interferences by the extremely rapid turn-ON time?

- | | |
|---------------|----------|
| A) Op-Amp | B) UJT |
| C) Transistor | D) TRIAC |

338. Which band is used for UHF in International Telecommunication System?

- | | |
|------------|-----------|
| A) Band 6 | B) Band 9 |
| C) Band 11 | D) Band 4 |

339. What is the use of battery analyzers with rapid-test program?

- | | |
|---|---|
| A) Test the load current delivered | B) Test the battery life |
| C) Indicate the health condition of battery | D) Test the charging current of battery |

340. What is the purpose of trimmer capacitor?

- | | |
|----------------|---------------|
| A) Coupling | B) Filtering |
| C) Fine tuning | D) Decoupling |

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

- | | |
|------------|--------------|
| A) Current | B) Frequency |
| C) Energy | D) Voltage |

342. What is the full of the abbreviation DPDT used in switches?

- | | |
|-----------------------------|-----------------------------|
| A) Double Pole Double Throw | B) Double Pole Direct Throw |
| C) Direct Pole Double Throw | D) Dual Phase Dual Throw |

343. What type of control is used for FET?

- | | |
|---------------------------------|--------------------------------|
| A) Resistance controlled device | B) Current controlled device |
| C) Voltage controlled device | D) Frequency controlled device |

344. Which IC package consist of 100 to 1000 transistors?

- | | |
|--|-----------------------------------|
| A) Large scale integration (LSI) | B) Small scale integration (SSI) |
| C) Very large scale integration (VLSI) | D) Medium scale integration (MSI) |

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

- | | |
|-----------|-----------|
| A) LM 317 | B) LM 305 |
| C) LM 100 | D) LM 105 |

346. Which parameter of the wire is directly proportional to the current carrying capacity?

- | | |
|----------------------|-------------------------|
| A) Conductor s shape | B) Conductor s diameter |
| C) Wire resistance | D) Passing current |

347. What is the maximum drain current, ID for BF 245B?

- | | |
|---------|---------|
| A) 25mA | B) 45mA |
| C) 15mA | D) 35mA |

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

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

349. Which impurity is added to form P - type semiconductor material?

- | | |
|------------|---------------|
| A) Gallium | B) Antimony |
| C) Arsenic | D) Phosphorus |

350. What is the name of the pair of metal strips used in battery cell?

- | | |
|---------------|------------|
| A) Electrodes | B) Cathode |
|---------------|------------|

C) Electrolyte	D) Carbon rod
351. Which meter is used to find the exact resistance value of resistors?	
A) Volt meter	B) Ohm meter
C) Ammeter	D) Watt meter
352. What is the use of photo transistor?	
A) Used as light controlled switch	B) Used as oscillator
C) Used as demodulator	D) Used in comparator circuit
353. What is the maximum specified voltage for the TRIAC TIC 201D?	
A) 1.5 V	B) 2.1 V
C) 1.7 V	D) 2.5 V
354. What is the advantage of SMPS in computer?	
A) High efficiency	B) Bulky
C) High frequency noise low	D) Servicing of SMPS is easy
355. What is the advantage of silicon over germanium for transistor fabrication?	
A) Higher thermal stability	B) Lower operating voltage
C) Lower thermal stability	D) Higher amplification factor
356. What is the name of the circuit that shifts the waveform upward or downward without disturbing its shape?	
A) Clipper circuit	B) Biased clipper circuit
C) Combination clipper circuit	D) Clamper circuit
357. Why the load testing is done on the lead-acid battery?	
A) Measure the rated output voltage	B) Verify the rated power delivery
C) Test I ₂ R power loss in the battery cell	D) Test the dimensional accuracy
358. What is the purpose of damping torque in PMMC meter?	
A) Control the magnetic field	B) Control the swinging of the coil
C) Control the jewel bearing	D) Control the pivot point
359. What is the purpose of vacuum contactors in electrical panel?	
A) Packet switching	B) Fast switching
C) Slow switching	D) Medium switching

360. What is the important feature of instrumentation amplifier?	
A) Low gain accuracy	B) Low gain accuracy
C) Increase the output voltage	D) Reduce the output off set voltage
361. What is the function of astable multivibrator in timer IC 555?	
A) Acting as transducers	B) Serving as an oscillator
C) Serving as an oscillator	D) Serving as comparator
362. What is the shape of standard wire gauge?	
A) Square metal disk	B) Circular metal disk
C) Rectangular plastic disk	D) Cylindrical glass disk
363. Why the complementary - symmetry amplifier is preferred over the other types of amplifier configurations?	
A) To eliminate the transformer	B) To minimize the gain
C) To get more voltage gain	D) To get less distortion
364. How the insulators are called?	
A) Thyristors	B) Semiconductors
C) Dielectrics	D) Molecules
365. In computer processing data, which table maintain the size of the partition?	
A) Procedure table	B) Partition table
C) Process table	D) Program table
366. Which tool is used for the simplest method of skinning wires?	
A) Thermal wire stripper	B) Manual wire stripper
C) Mechanical wire stripper	D) Electrician's knife
367. What is the limitation of integrated circuits?	
A) Greater flexibility	B) Greater flexibility
C) Increased reliability	D) Drains more current
368. Which type of packaging is used to transistors utilized for medium power amplification?	
A) Plastic packaging	B) Plastic packaging with metal heatsinks
C) Ceramic packaging	D) Metal packaging
369. How many ohms is equal to one Mega ohm?	
A) 1000 kW	B) 100 kW
C) 10 kW	D) 2000 kW
370. Which materials are used for semiconductor?	

- | | |
|-------------------------|--------------------------|
| A) Silver and aluminium | B) Silicon and germanium |
| C) Gallium and indium | D) Arsenic and antimony |

371. How the pass band gain of the circuit is expressed?

- | | |
|-------------|--------------|
| A) In hertz | B) In hertz |
| C) In volts | D) In ampere |

372. Which is the package type for the JFET BFW10?

- | | |
|----------|----------|
| A) TO-92 | B) TO-82 |
| C) TO-72 | D) TO-62 |

373. Which device is used to test the fully charged condition of a lead acid battery cell?

- | | |
|---------------|-------------------------------|
| A) Hydrometer | B) DC voltmeter |
| C) Multimeter | D) High rate discharge tester |

374. How many electrons are contained in coulomb of electric charge?

- | | |
|------------------------------------|------------------------------------|
| A) 6.25×10^{16} electrons | B) 6.25×10^{12} electrons |
| C) 6.25×10^{18} electrons | D) 6.25×10^8 electrons |

375. Which material is used for negative terminal of alkaline manganese dioxide batteries?

- | | |
|---------------------|------------|
| A) Nickel hydroxide | B) Lithium |
| C) Cadmium | D) Zinc |

376. What are the fundamental properties of insulation materials?

- | | |
|------------------------------------|--|
| A) Length and cross sectional area | B) Temperature and electrical hazards |
| C) Low resistance and thermal heat | D) Insulation resistance and dielectric strength |

377. Which electrical parameter is measured by the megger?

- | | |
|--------------------------|------------|
| A) Insulation resistance | B) Current |
| C) Frequency | D) Voltage |

378. Which artificial respiration method to be avoided to a person with abdomen injury?

- | | |
|-------------------------|--------------------------|
| A) Nose-to-mouth method | B) Schafer's method |
| C) Mouth-to-nose method | D) Mouth-to-mouth method |

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

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

380. What is the name of instrument used to measure electrical quantities?

- | | |
|-----------|--------------------|
| A) Meter | B) Vernier caliper |
| C) Tester | D) Tester |

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

- | | |
|--------------------------------|-------------------------------|
| A) Air damping control | B) Spring control |
| C) Magnetic attraction control | D) Magnetic repulsion control |

382. Which parameter is maintained constant in zener diode?

- | | |
|------------|---------------|
| A) Voltage | B) Resistance |
| C) Power | D) Current |

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

- | | |
|---------|---------|
| A) 0.56 | B) 0.22 |
| C) 0.76 | D) 0.47 |

384. How many Op-Amps are fabricated inside the LM 324 IC pack?

- | | |
|------------------|------------------|
| A) Three Op-Amps | B) Three Op-Amps |
| C) Two Op-Amps | D) Five Op-Amps |

385. Which is the fastest A/D conversion techniques?

- | | |
|---------------------------------------|--|
| A) Low speed data acquisition applies | B) Absolute conversion accuracy |
| C) Absolute conversion accuracy | D) High to medium speed data acquisition applies |

386. Which shortcut key function is used to close the working window on the computer?

- | | |
|---------------|-------------|
| A) Alt + F4 | B) Ctrl + P |
| C) Shift + F3 | D) Ctrl + S |

387. What is the maximum emitter to base voltage V_{EB} (max) for the transistor BC 147?

- | | |
|-------|-------|
| A) 8V | B) 4V |
| C) 6V | D) 5V |

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

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

389. How the circuit schematic drawn using the simulation software is tested?

- | | |
|-------------------------------|--------------------------------|
| A) Using virtual oscilloscope | B) Using external oscilloscope |
| C) Using analysis menu | D) Using multimeter |

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

- | | |
|------------|-----------|
| A) Arsenic | B) Indium |
|------------|-----------|

C) Boron

D) Gallium

391. What are the uses of simulation softwares?

A) Design a circuit

B) Replace defective components

C) Solder and desolder components

D) Design and test a circuit

392. What is the total voltage of six 1.5 V cells, connected in series?

A) 9 VDC

B) 6 VDC

C) 3 VDC

D) 12 VDC

393. What is the range of output voltage of regulator IC LM 317?

A) 0 to 32 V

B) 0 to 30 V

C) 0 to 25 V

D) 1.2 V to 32 V

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

A) Cascoded amplifier

B) Cascaded amplifier

C) Complementary symmetry amplifier

D) Darlington pair amplifier

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

A) 1 to 100 nano seconds

B) 1 to 25 nano seconds

C) 1 to 100 milli seconds

D) 10 to 60 nano seconds

396. What is the shape of warning sign board?

A) Square shape

B) Hexagonal shape

C) Circular shape

D) Triangular shape

397. Which torque is used in PMMC meter movement?

A) Low torque

B) Moderate torque

C) Insufficient torque

D) High torque

398. Which metal has very good conductivity of electric current?

A) Copper

B) Gold

C) Aluminium

D) Silver

399. What is the information stored in digital registers?

A) Analog values

B) Alphanumeric values

C) Decimal values

D) Binary values

400. Which component opposes any change in current?

A) Resistor

B) Diode

C) Inductor

D) Capacitor

401. What is the shape of prohibition sign?

A) Triangular

B) Circular

C) Square

D) Rectangular

402. Which current flows in TRIAC between MT1 and MT2?

A) Leakage current

B) Principal current

C) Conventional current

D) Reverse current

403. What is the advantage of photo transistors over photo diodes?

A) Considerable greater sensitivity

B) Considerably lower sensitivity

C) Vulnerable to electrical sources

D) Limit voltage handling capacity

404. What is the propagation delay of the standard TTL chip?

A) 5 ns

B) 10 ns

C) 12 ns

D) 8 ns

405. What is the additional advantage of rosin flux used for soldering electronic components?

A) It is good conductor

B) It is non-conductive

C) It is a chemical paste

D) Inorganic acid in nature

406. Which type of amplifier is used to operate the loud speaker?

A) IF Amplifier

B) Power Amplifier

C) RF Amplifier

D) Voltage Amplifier

407. Which is the package type for the JFET BFW10?

A) TO-82

B) TO-92

C) TO-72

D) TO-62

408. When does the biased negative clipper removes the portion of input signal?

A) Signal voltage equals the bias battery voltage

B) Signal voltage becomes greater than bias battery voltage

C) During the positive half cycle of input

D) Signal voltage is lesser than bias battery voltage

409. Which circuits requires the flip - flops for their operation?

A) Modulator circuits

B) Oscillator circuits

C) Memory circuits

D) Amplifier circuits

410. What is the forward voltage for the single colour orange LEDs?

A) 2 V

B) 0.8 V

C) 2.5 V

D) 0.5 V

411. Which is the property of IGBT?

- | | |
|---------------------------------------|----------------------------------|
| A) High efficiency and fast switching | B) Significant power consumption |
| C) Low input impedance | D) Low gate signal |

412. How the single strand wire is called?

- | | |
|------------------|----------------------|
| A) Twisted wire | B) Hook up wire |
| C) Flexible wire | D) Multi strand wire |

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

- | | |
|----------|----------|
| A) 10 mA | B) 5 mA |
| C) 20 mA | D) 30 mA |

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

- | | |
|------------------------------|------------------------|
| A) High frequency oscillator | B) High gain amplifier |
| C) High speed switching | D) Low pass filter |

415. Which factor influences the severity of electrical shock?

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

416. How gate is biased in JFET?

- | | |
|-------------------|-------------------------|
| A) Reverse biased | B) AC supply function |
| C) Forward biased | D) Dual supply function |

417. What is the current rating of voltage regulator IC LM317L?

- | | |
|----------|----------|
| A) 0.4 A | B) 0.1 A |
| C) 0.3 A | D) 0.2 A |

418. How the stationary electric charges are called?

- | | |
|---------------------|-----------------------|
| A) Chemical charges | B) Static charges |
| C) Kinetic charges | D) Electrical charges |

419. Which mode is used in differential amplifier?

- | | |
|-------------------|----------------------------|
| A) Common base | B) Common emitter |
| C) Common emitter | D) Common - mode operation |

420. What is the maximum power dissipation for a 555 IC?

- | | |
|-------------------|-------------------|
| A) Below 500 mW | B) Exactly 300 Mw |
| C) Exactly 300 Mw | D) Above 800 mW |

421. Which bonding material is used for soldering a joint?

- | | |
|-----------|---------|
| A) Grease | B) Oil |
| C) Flux | D) Acid |

422. What is the maximum reverse voltage that can be applied across the general purpose LED?

- | | |
|---------|---------|
| A) 32 V | B) 15 V |
| C) 12 V | D) 8 V |