

Duration: 30 Mins

Total Marks: 422

ID: ITISKILL2194N9

Student Name: _____ Roll No: _____

1. 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 decrease to 10 Ohm
C) Resistance will decrease to 100 Ohm
D) Resistance will increase to around 1 Mega Ohm

- A) Voltage
C) Current

- B) Frequency
D) Resistance

2. What is the code number of TRIAC?

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

10. What type of control is used for FET?

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

3. What is the shape of warning sign board?

- A) Triangular shape
B) Circular shape
C) Hexagonal shape
D) Square shape

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

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

4. Which torque is used in PMMC meter movement?

- A) Low torque
B) Insufficient torque
C) Moderate torque
D) High torque

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

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

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

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

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

- A) Rosin
B) Organic acid
C) Mild acid
D) Resin

6. What is the current gain of a common ? base amplifier?

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

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

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

7. 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 component group
C) Clicking from the similar circuit
D) Clicking on the list of components

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

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

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

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

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

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

9. What is the name of the motion of charged particles in any medium?

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

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

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

18. What is the reason for electric fire?

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

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

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

19. 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

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

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

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

- A) Chemical energy into electrical energy B) Electrical energy into light energy
C) Mechanical energy into electrical energy D) Electrical energy into mechanical energy

30. 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

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

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

31. What is the term stands for TRIAC?

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

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

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

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

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

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

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

33. Rate of change of input voltage

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

34. What is the purpose of damping torque in PMMC meter?

- A) Control the pivot point B) Control the swinging of the coil
C) Control the magnetic field D) Control the jewel bearing

24. Which electrical parameter opposes the flow of electrons?

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

35. Which is the combination of photo transistor?

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

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

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

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

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

26. What is the input impedance of IGBT?

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

37. Which tool is used for the simplest method of skinning wires?

- A) Mechanical wire stripper B) Thermal wire stripper

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

C) Electrician's knife D) Manual wire stripper

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

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

39. Which meter movement is not affected by stray magnetic fields?

- A) PMMC meter B) MI meter - Repulsion type
C) MI meter - attraction type D) Thermo couple meter

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

- A) 12 VDC B) 6 VDC
C) 9 VDC D) 3 VDC

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

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

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

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

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

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

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

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

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

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

46. What is the use of schmitt trigger circuit?

- A) Voltage regulator B) AC to DC converter
C) AC to DC converter D) Electronic thermostant

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

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

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

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

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

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

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

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

51. Where does the depletion region exists in a bipolar transistor?

- A) Between collector and emitter electrodes B) Between E-B and B-C electrodes
C) Between collector - base electrodes D) Between emitter - base electrodes

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

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

53. Why LC tuned circuits are not used in audio frequency oscillators?

- A) LC components are not available B) LC tank circuit operation requires high voltage
C) LC tank circuit does not produce AF signals D) LC values required is too large

54. 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

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

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

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

A) BT136

B) 2N2648

C) B3202

D) MOC3020

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

A) Water

B) Organic flux

C) Isopropyl alcohol

D) Petrol

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

A) 110

B) 101

C) 111

D) 100

59. Which electrical property opposes the flow of electrons?

A) Resistance

B) Current

C) Voltage

D) Power

60. Which electrical parameter is measured by the megger?

A) Insulation resistance

B) Frequency

C) Voltage

D) Current

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

A) JIS standard

B) Home codes

C) JEDEC standard

D) PRO-ELECTRON standard

62. Which function control in CRO, adjust the trace sharper?

A) Focus

B) Intensity

C) Amplitude (V/Div)

D) Time/Div trigger

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

A) 0.3 A

B) 0.1 A

C) 0.2 A

D) 0.4 A

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

A) Delivers reduced secondary voltage

B) Leads to interwinding leakage

C) Burn out windings

D) Transformer heated up excessively

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

A) Leakage current

B) Principal current

C) Reverse current

D) Conventional current

66. Which parameter is maintained constant in zener diode?

A) Power

B) Resistance

C) Voltage

D) Current

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

A) 1.0 VDC

B) 1.5 VDC

C) 4.0 VDC

D) 2.5 VDC

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

A) 0.4

B) 0.632

C) 0.5

D) 0.864

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

A) I_C / I_E

B) I_B / I_E

C) I_E / I_C

D) I_E / I_C

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

A) 0.9 Amp

B) 2.0 Amp

C) 5.0 Amp

D) 1.8 Amp

71. What is the specific gravity of concentrated sulphuric acid?

A) 1.175

B) 1.245

C) 1.835

D) 1.945

72. What is stationary electric charges?

A) Electrical charges

B) Chemical charges

C) Static charges

D) Kinetic charges

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

A) Peak clipper circuit

B) Positive clamping circuit

C) Negative clamping circuit

D) Combination clipper circuit

74. Which circuit uses photo-darlington devices?

A) DC circuits

B) AC powered circuits

C) Counter circuits

D) Amplifier circuits

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

A) Measure insulation of wire

B) Measure voltage

C) Measure diameter of wire

D) Measure current

76. Which is electronic simulation software?

A) Photoshop

B) AutoCAD

C) MS Office

D) Macspice

77. What is the purpose of using IC74LS190?

A) Comparator

B) Attenuator

C) Modulator

D) Up/down counter

78. What is the advantage of IGBT?

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

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

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

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

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

81. Which memory device loses data on power failure?

- | | |
|-----------|--------------|
| A) CD ROM | B) Hard disc |
| C) ROM | D) RAM |

82. 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 |

83. What is the maximum safe reverse voltage rating of a diode?

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

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

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

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

- | | |
|--------------------------------------|--|
| A) It results in oxidation of solder | B) It disturbs the chemical bonding take place |
| C) It will corrode the joint | D) Flux will not dissolve |

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

- | | |
|----------|----------|
| A) 0.8 V | B) 0.5 V |
| C) 2.5 V | D) 2 V |

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

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

88. How the insulators are called?

- | | |
|-------------------|----------------|
| A) Semiconductors | B) Dielectrics |
| C) Molecules | D) Thyristors |

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

- | | |
|-----------------------------------|--------------------------------------|
| A) Industry Software Architecture | B) Institution Standard Architecture |
| C) Industry Standard Architecture | D) Industry System Architecture |

90. Which circuit photo SCR opto couplers are used?

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

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

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

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

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

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

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

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

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

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

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

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

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

97. What are the basic components required for a clipping

circuit?

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

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

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

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

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

100. 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 |

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

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

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

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

103. Which class of fire is classified involving metals?

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

104. Which material is used as electrical insulator?

- | | |
|--------------|--------------|
| A) Germanium | B) Gallium |
| C) Porcelain | D) Aluminium |

105. Find the value of shunt resistance required for 1 mA meter to extend the range and measure 10 mA ($R_M = 27 \Omega$) ?

- | | |
|---------------|---------------|
| A) 1 Ω | B) 4 Ω |
| C) 3 Ω | D) 2 Ω |

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

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

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

- | | |
|-------------------------|------------------------|
| A) Capacitive reactance | B) Inductive reactance |
| C) Capacitance | D) Inductance |

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

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

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

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

110. What is the advantage of MOSFET?

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

111. What is the type of transistor BPX81?

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

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

- | | |
|------------------|--------------|
| A) 0 to 25 V | B) 0 to 30 V |
| C) 1.2 V to 32 V | D) 0 to 32 V |

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

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

114. Which component opposes any change in current?

- | | |
|-------------|--------------|
| A) Diode | B) Capacitor |
| C) Resistor | D) Inductor |

115. What is the shape of prohibition sign?

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

116. What is the shape of standard wire gauge?

- | | |
|-----------------------------|---------------------------|
| A) Square metal disk | B) Cylindrical glass disk |
| C) Rectangular plastic disk | D) Circular metal disk |

117. What is the use of photo transistor?

- | | |
|------------------------------------|------------------------|
| A) Used as light controlled switch | B) Used as demodulator |
|------------------------------------|------------------------|

C) Used as oscillator	D) Used in comparator circuit
118. Which type of soldering is used for electronic circuit?	
A) Brazing	B) Soft soldering
C) Hard soldering	D) Hot soldering
119. What are the uses of simulation softwares?	
A) Solder and desolder components	B) Design a circuit
C) Replace defective components	D) Design and test a circuit
120. How the maximum permissible voltage that can be applied across the collector ? Emitter junction of a transistor is indicated?	
A) VBE (max) in volts	B) VCC in volts
C) VCE (max) in volts	D) VCB (max) in volts
121. Which metal has very good conductivity to the electric current?	
A) Copper	B) Silver
C) Gold	D) Aluminium
122. Why the complementary - symmetry amplifier is preferred over the other types of amplifier configurations?	
A) To get more voltage gain	B) To get less distortion
C) To eliminate the transformer	D) To minimize the gain
123. Which space is used to design circuit in schematic editor of the Tina software?	
A) Components type space	B) File operation space
C) Components groups space	D) Circuit work space
124. Which parameter is measured by a multimeter?	
A) Frequency	B) Energy
C) Voltage	D) Time duration
125. What is the function of opto-coupler in the switching operation of digital input signal?	
A) Amplifier the signal	B) Produces electrical noise signal
C) Defects the operation of switching signal	D) Converts voltage into current
126. Which class of amplifier uses fixed bias because of its imperent advantage of transistor will never go to saturation?	
A) Class - C	B) Class - A
C) Class - B	D) Class - AB

127. 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
128. Which bonding material is used for soldering a joint?	
A) Grease	B) Oil
C) Acid	D) Flux
129. Which energy is converted into electrical energy in hydropower stations?	
A) Chemical energy	B) Mechanical energy
C) Light energy	D) Heat energy
130. What is the switching speed of solid state relays?	
A) 1 to 100 nano seconds	B) 10 to 60 nano seconds
C) 1 to 25 nano seconds	D) 1 to 100 milli seconds
131. 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
132. What is the minimum current ratings of solid state relays available in low power packages?	
A) 50 milli Ampere	B) 10 milli Ampere
C) Few micro Amperes	D) 100 milli Ampere
133. 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
134. How the overlapping of excess sheet metal causing bulge at seam and edge is prevented?	
A) Notches	B) Mallet
C) Square stake	D) L - angles
135. What is the term stands for TRIAC?	
A) Triode AC semiconductor	B) Triode Access console
C) Triode Alternate control	D) Triode DC semiconductor
136. What is the percentage of sulphuric acid in electrolyte used for lead-acid batteries?	
A) 40%	B) 25%
C) 12%	D) 27%

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

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

138. What is the maximum drain current ID for BFW10?

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

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

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

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

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

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

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

142. What is the purpose of vacuum contactors in electrical panel?

- A) Slow switching
- B) Fast switching
- C) Packet switching
- D) Medium switching

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

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

144. How gate is biased in JFET?

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

145. How many ohms is equal to one Mega ohm?

- A) 1000 kW
- B) 100 kW
- C) 2000 kW
- D) 10 kW

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

- A) Chatter during a slow release
- C) Excessive number of operations

- B) Low contact current
- D) Excessive contact current

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

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

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

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

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

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

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

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

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

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

152. Which unit is used to measure capacitance value?

- A) Mho
- B) Ohm
- C) Henry
- D) Farad

153. Which software is used to simulate electronic circuits?

- A) Multi sim
- B) MS office
- C) Photo shop
- D) Auto cad

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

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

155. What is the advantage of silicon over germanium for transistor fabrication?

- A) Higher amplification factor
- B) Lower operating voltage
- C) Higher thermal stability
- D) Lower thermal stability

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

- A) 20 mA
C) 5 mA

- B) 8 mA
D) 10 mA

157. How can you confirm a transistor as defective?

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

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

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

159. What is the cause of burnt relay contacts?

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

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

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

161. How the single strand wire is called?

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

162. What is the function of astable multivibrator in timer IC 555?

- A) Serving as comparator B) Serving as an oscillator
C) Serving as an oscillator D) Acting as transducers

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

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

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

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

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

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

166. Why the plunger desoldering tool needs periodical

cleaning?

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

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

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

168. Which mode is used in differential amplifier?

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

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

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

170. Which value is equal to one picofarad?

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

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

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

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

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

173. 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

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

- A) Micro processor B) Memory
C) System unit D) Graphics card

175. What is the advantage of SMPS in computer?

- A) High frequency noise low B) Bulky
C) Servicing of SMPS is easy D) High efficiency

176. Find the total resistance value of 10 ohms and 20 ohms connected in parallel.

A) 66.66 Ohms
C) 6.666 Ohms

B) 6666 Ohms
D) 666.6 Ohms

C) Regenerative feedback

D) Current controlled feedback

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

A) Arsenic
C) Gallium

B) Indium
D) Boron

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

A) Brown, brown, brown
C) Brown, black, brown

B) Black, brown, black
D) Brown, black, red

179. What is the colour of positive electrode in fully charged lead acid battery?

A) Red colour
C) Grey colour

B) Spongy grey colour
D) Reddish brown

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

A) 6.25×10^{18} electrons
C) 6.25×10^{16} electrons

B) 6.25×10^8 electrons
D) 6.25×10^{12} electrons

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

A) TO-92
C) TO-72

B) TO-82
D) TO-62

182. What are the fundamental properties of insulation materials?

A) Insulation resistance and dielectric strength
C) Length and cross sectional area

B) Temperature and electrical hazards
D) Low resistance and thermal heat

183. Which meter uses a moving coil for measurement?

A) MI repulsion type
C) LCR meter

B) MI attraction type
D) PMMC meter

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

A) Medium
C) High

B) Very high
D) Low

185. How the sensitivity of voltmeter is determined?

A) Maximum voltage measurement
C) FSD current

B) Ohms per volt rating
D) Meter coil resistance

186. How the negative feedback is called?

A) Voltage controlled feedback
B) Degenerative feedback

187. Which angle is checked by the try square?

A) 60 Degree
C) 75 Degree

B) 45 Degree
D) 90 Degree

188. Which metal coating is used on compact disk?

A) Nickel
C) Chromium

B) Silver
D) Aluminium

189. Which material conducts electricity?

A) Copper
C) Glass

B) Mica
D) Paper

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

A) Pulse probability frequency
C) Pulse repetition frequency

B) Power regulated frequency
D) Pulse repetition frequency

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

A) Four Op-Amps
C) Two Op-Amps

B) Two Op-Amps
D) One Op-Amp

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

A) Using L and C
C) By using quartz crystal

B) Increase the supply voltage
D) Improve the property of circuits

193. What is the limitation of integrated circuits?

A) Increased reliability
C) Greater flexibility

B) Drains more current
D) Greater flexibility

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

A) Keeping the meter in vertical position
C) By replacing moving coil

B) By replacing pointer
D) By replacing moving coil

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

A) Positive feedback
C) Negative feedback

B) No feedback
D) Both positive and negative feedback

196. 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

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

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

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

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

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

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

200. In computer processing data, which table maintain the size of the partition?

- A) Partition table B) Program table
C) Process table D) Procedure table

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- A) More voltage dropped B) Allows high current flow
C) Opposes more current D) Resistance increases

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

- A) Three B) Two
C) Five D) Four

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

225. Which part of the relay causes most trouble?

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

226. What is the information stored in digital registers?

- | | |
|-------------------|------------------------|
| A) Decimal values | B) Alphanumeric values |
| C) Analog values | D) Binary values |

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

- | | |
|----------|---------|
| A) Eight | B) One |
| C) Seven | D) Four |

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

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

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

- | | |
|----------|----------|
| A) 10 mA | B) 5 mA |
| C) 8 mA | D) 20 mA |

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

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

231. What is the advantage of PIN photo diodes?

- | | |
|---|---|
| A) Low sensitivity in the Ultraviolet range | B) Medium sensitivity in the infrared range |
| C) Low sensitivity in the infrared range | D) High sensitivity in the infrared range |

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

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

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

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

234. How the performance of the amplifier designed using the simulation software is tested?

- | | |
|--|-------------------------------|
| A) Using test and measuring equipments | B) Using measuring equipments |
| C) Using virtual instrumentation testing | D) Using multimeter |

235. What is the advantage of IGBT?

- | | |
|---|---------------------------------------|
| A) Low efficiency and slow switching | B) High efficiency and fast switching |
| C) IGBT is a gate current driven device | D) It has low input impedance |

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

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

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

- | | |
|--|--|
| A) By the bias voltage to the photo transistor | B) By the light sensitive receiver inside |
| C) By the external signal to the transistor | D) By IR light produced inside the package |

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

- | | |
|----------------------------|-------------------------------------|
| A) Trickle charging method | B) Constant voltage charging method |
| C) Float charging method | D) Constant current charging method |

239. What is the efficiency transformer coupled class A amplifier?

- | | |
|------------------|------------------|
| A) About 50% | B) Less than 20% |
| C) More than 60% | D) Unity |

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

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

241. Which cores are used in intermediate frequency transformers?

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

242. Which factor determines the inductance value?

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

243. How power rating is specified for transformers?

- | | |
|----------------|---------------------|
| A) Voltage (V) | B) Horse power (HP) |
| C) Watts (W) | D) Volt ampere (VA) |

244. How the gas and liquefied gases are classified

- | | |
|-----------------|-----------------|
| A) Class B fire | B) Class C fire |
|-----------------|-----------------|

C) Class A fire

D) Class D fire

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

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

246. How gate is biased in JFET?

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

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

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

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

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

249. What is the minimum current ratings of solid state relays available in low power packages?

- | | |
|----------------------|---------------------|
| A) Few micro Amperes | B) 100 milli Ampere |
| C) 50 milli Ampere | D) 10 milli Ampere |

250. What is the advantage of MOSFET?

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

251. Which material is used for making instrument cabinets?

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

252. Which is the N - channel FET?

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

253. What is the purpose of flux in soldering electronic circuit components?

- | | |
|-----------------------------------|--|
| A) Reduce the solder cooling time | B) Increase the melting temperature of solder |
| C) Form the oxide layer | D) Dissolve the oxide layer on the metal surface |

254. 6 What is the input impedance of IGBT?

A) Infinity	B) Unity
C) High	D) Low
255. Which soldering instrument has hot air blowing facility?	
A) Soldering station	B) Soldering iron
C) Wave soldering machine	D) Temperature controlled soldering iron
256. What is the natural shape of a quartz crystal?	
A) Hexagonal prism with pyramid at ends	B) Pentagonal prism with pyramid at ends
C) Cylindrical shape with pyramid at ends	D) Cube shape with pyramid at ends
257. How many time constant period is required to fully charge a capacitor?	
A) 3 time constants	B) 7 time constants
C) 5 time constants	D) 10 time constants
258. Which characteristics enable the deflection of pointer in the attraction type moving iron meter?	
A) Weight of the soft iron pieces	B) Deflection is independent of current direction
C) Deflecting and controlling torques are	D) Deflection is inversely proportional to current
259. How the stationary electric charges are called?	
A) Electrical charges	B) Chemical charges
C) Kinetic charges	D) Static charges
260. Which device is a unipolar transistor?	
A) IGBT	B) BJT
C) UJT	D) FET
261. Which instrument used to measure resistance, capacitance and inductance?	
A) Wein bridge	B) Kelvin bridge
C) LCR bridge	D) Wheatstone bridge
262. Electrical conductivity of gold is	
A) 94%	B) 67%
C) 100%	D) 56%
263. Which type of voltage regulator is IC 723?	
A) Three pin negative voltage regulator	B) Three pin positive voltage regulator
C) Multipin variable voltage regulator	D) Three pin adjustable voltage regulator
264. Which characteristics exhibits the current conduction increases while the voltage across the devices decreases in a	

DIAC?	
A) Nonlinearity characteristics	B) Linearity characteristics
C) Negative resistance characteristics	D) Positive resistance characteristics
265. Which battery is used for cellular phones?	
A) Nickel ion	B) Sodium sulphur
C) Zinc chloride	D) Lithium ion
266. What is the effect of electric shock at very low voltage levels (Less than 40v)?	
A) Unpleasant tingling sensation	B) Burning of the skin
C) Fibrillation	D) Muscles contact
267. What is the name of the process of converting AC into DC voltage?	
A) Demodulating	B) Amplifying
C) Rectifying	D) Inverting
268. What is the code number of TRIAC?	
A) 2N2646	B) BT136
C) BFW10	D) 2N1597
269. Why the solvent Iso Propyl Alcohol (IPA) is used on the solder joint?	
A) Remove residual flux and prevent corrosion	B) To help the corrosive action
C) Cleaning before soldering the joint	D) To break down the acid within the joint
270. Which material contains eight electrons in valency layer?	
A) Insulators	B) Conductors
C) Semiconductors	D) Intrinsic semiconductors
271. What is the power dissipated if 10mA current flows through a 10K Ohm resistor?	
A) 4000 milli watts	B) 3000 milli watts
C) 1000 milli watts	D) 2000 milli watts
272. What is the typical forward voltage drop of the yellow colour LED?	
A) 2.2 V	B) 1.8 V
C) 2 V	D) 2.1 V
273. Which method is used for blanketing with foam to extinguish the fire?	
A) Cooling	B) Starving
C) Heating	D) Smothering

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

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

275. What is the main application of photo resistor?

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

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

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

277. 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 the dimensional accuracy
- D) Test I²R power loss in the battery cell

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

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

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

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

280. Which circuit uses the enhancement type MOSFET?

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

281. 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

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

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

283. In which analog meter the battery is provided?

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

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

- A) Cathode
- B) Electrolyte
- C) Electrodes
- D) Carbon rod

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

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

286. What is characteristics of instrumentation amplifier?

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

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

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

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

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

289. How many alternating layers are there in IGBT?

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

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

- A) Reverse current
- B) Conventional current
- C) Leakage current
- D) Principal current

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

- A) 1.5 V to 2.2 V
- B) 2.3 V to 3.6 V
- C) 5.0 V to 7.5 V
- D) 4.5 V to 5.5 V

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

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

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

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

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

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

295. What is the purpose of wood rasp file?

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

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

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

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

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

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

- | | |
|---------------------------------|--------------------------|
| A) Inversely proportional | B) Wire gets less heat |
| C) Drops more voltage across it | D) Directly proportional |

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

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

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

- | | |
|--|-------------------------------------|
| A) Suitability for medium power applications | B) Low switching speed |
| C) Higher switching repetition rates | D) Higher driving power requirement |

301. What is the unit of inductance?

- | | |
|----------|----------|
| A) Watts | B) Farad |
| C) Joule | D) Henry |

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

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

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

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

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

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

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

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

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

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

307. Which is the 3 terminal, negative voltage regulator IC?

- | | |
|------------|------------|
| A) LM 320 | B) LM 340 |
| C) IC 7905 | D) IC 7812 |

308. Which fire extinguisher is used to put off class A type of fire?

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

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

- | | |
|----------------------|---------------------------------|
| A) Sulphuric acid | B) Zinc chloride |
| C) Alkaline solution | D) Potassium hydroxide solution |

310. Which signal is sent by the SMPS to computer mother board?

- | | |
|----------------------|---------------------|
| A) Power good signal | B) Processor signal |
| C) Peripheral signal | D) Device signal |

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

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

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

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

313. Which device is a unipolar transistor?

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

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

- A) Practically very low
C) Practically infinity

- B) Practically unity
D) Practically zero

- A) 20 V
C) 40 V

- B) 10 V
D) 30 V

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

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

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

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

317. What is the drawbacks of LDR?

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

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

- A) Processor
C) Buffer
- B) Memory
D) Chip set

319. At which temperature the 6040 solder start meeting?

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

320. What is the advantage of using digital multimeter?

- A) Easy portability
C) Accuracy
- B) Linear scale
D) Logarithmic scale

321. What is the purpose of trimmer capacitor?

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

330. What is the use of flip - flop?

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

331. What is the result of forced air is blown to cool the joint while soldering?

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

332. What is the full form of electronic component MOV?

- A) Metal Over Varistor
C) Metal Over Varactor
- B) Metal Oxide Varactor
D) Metal Oxide Varistor

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

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

334. Which type of packaging is used to transistors utilized for medium power amplification?

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

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

- A) It is good conductor B) Inorganic acid in nature
C) It is non-conductive D) It is a chemical paste

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

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

337. What is the full form of the abbreviation MOSFET?

- A) Metal organic serial FET B) Medium oscillator signal FET
C) Minimum output signal FET D) Metal oxide semiconductor FET

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

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

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

- A) Amplifier circuits B) Modulator circuits
C) Memory circuits D) Oscillator circuits

340. Which rechargeable cell is designed with conductive polymer?

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

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

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

342. 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
C) Each diode carries half the load current D) The need of bulky transformer

343. Which insulation layer is used in MOSFET?

- A) Arsenic material B) Antimony material
C) Silicon-di-oxide D) Germanium material

344. What is the name of instrument used to measure

electrical quantities?

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

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

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

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

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

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

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

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

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

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

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

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

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

351. What is the full form of the abbreviation PMMC meter?

- A) Permanent Magnet Moving Coil meter B) Position Magnet Moving Coil meter
C) Principle Magnet Moving Coil meter D) Parallel Magnet Moving Coil meter

352. What is the unit of electric charge?

- A) Hertz B) Coulomb
C) Ampere D) Volts

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

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

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

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

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

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

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

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

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

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

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

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

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

- A) Wooden frame
- B) Aluminium frame
- C) Steel frame
- D) Ceramic frame

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

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

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

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

362. 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

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

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

364. How batteries are classified?

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

365. How the single strand wire is called?

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

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

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

367. What is the important feature of instrumentation amplifier?

- A) Reduce the output off set
- B) Increase the output voltage
- C) Low gain accuracy
- D) Low gain accuracy

368. Which is the property of IGBT?

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

369. Which step is important for soldering a joint?

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

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

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

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

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

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

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

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

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

374. What is the unit of electric charge?

- A) Volts
- B) Coulomb
- C) Ampere
- D) Hertz

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

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

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

- A) Complementary symmetry amplifier
- B) Cascaded amplifier
- C) Darlington pair amplifier
- D) Cascode amplifier

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

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

378. 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) 2.134 v
- B) 1.525 v
- C) 0.213 v
- D) 3.567 v

379. How batteries are classified based on their working?

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

380. Which materials are used for semiconductor?

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

381. Which meter is used to find the exact resistance value of resistors?

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

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

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

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

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

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

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

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

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

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

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

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

- A) Lamp is ON at 100 Degree Centigrade
- B) Lamp is ON at 320 Degree Centigrade
- C) Lamp is OFF at room temperature
- D) Lamp is ON at 400 Degree Centigrade

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

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

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

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

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

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

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

- A) By the fuse
- B) Using Safety resistor
- C) Using MCB
- D) By soft start circuit

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

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

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

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

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

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

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

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

396. What is the function of clipper circuit?

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

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

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

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

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

399. Which electrical quantity is directly proportional to the current carrying capacity of the conductor?

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

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

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

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

- A) Series B) Star
C) Delta D) Parallel

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

- A) Conductance B) Inductance

- C) Electric current D) Resistance

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

- A) Call the doctor B) Switch OFF power supply
C) Break the contact D) Pull the person from electrical contact

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- A) 8 ns B) 5 ns
C) 10 ns D) 12 ns

412. Which factor influences the severity of electrical shock?

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

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

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

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

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

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

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

416. What is the shape of mandatory signs?

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

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

- A) 0.94 B) 0.56

- C) 1 D) 0.67

418. Which formula is used to find the conductance?

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

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

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

420. Which process the ICS are made?

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

421. What is the rated voltage of a single cell in lead acid battery?

- A) 2.2 V B) 12 V
C) 2.0 V D) 1.5 V

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

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