THDCIL
JUNIOR ENGINEER(ELECTRICAL)
SAMPLE PAPER-III

1. If the supply frequency increases, the skin effect is
   a) decreased b) increased
   c) remains same d) none of these
2. The meter used for electrical power is called
   a) kWh meter b) Voltmeter
   c) Ammeter d) Wattmeter
3. The essential requirement of measuring instrument is
   a) deflecting torque
   b) controlling torque
   c) damping torque
   d) all of the above
4. The deflecting torque can be produced by
   a) gravity control b) spring control
   c) air friction d) magnetically
5. The damping torque can be produced by
   a) eddy currents b) gravity control
   c) electro-statically d) thermally
6. Thermal effect is used for producing deflecting torque is
   a) wattmeter b) energy water
   c) ammeter d) all of the above
7. Chemical effect is used for the operation of
   a) voltmeter b) ammeter
   c) ampere hour meter d) kWh meter
8. For controlling the vibrations of the disc of A.C. energy meter, damping torque is produced by
   a) eddy current b) chemical effect
   c) electrostatic d) magnetic effect
9. M.C. instrument is
   a) robust b) accurate
   c) consumes less power
   d) possesses all the above three advantages
10. For increasing the range of an ammeter, connect
   a) a high value resistance in series with the ammeter coil
   b) a high value resistance in parallel with the ammeter coil
   c) a low value resistance in parallel with the ammeter coil
   d) a low value resistance in series with the ammeter coil
11. For increasing the range of voltmeter, connect a
   a) high value resistance in series with voltmeter
   b) low value resistance in series with voltmeter
   c) high value resistance in parallel with voltmeter
   d) low value resistance in parallel with voltmeter
12. The cost of ammeter as compared to voltmeter is
   a) same b) higher
   c) lower d) very high
13. For measuring a value of resistance which of the meter will give accurate result
   a) ohm meter
   b) multi-meter
   c) potentiometer
   d) vacuum tube voltmeter (V.T.V.M.)
14. Which of the following types of damping is most commonly employed in the dynamometer type wattmeter
   a) fluid friction
   b) eddy current
   c) air friction
   d) air and fluid friction both
15. The energy meter used for measuring energy of a d.c. circuit is
   a) ampere hour type
   b) induction type
   c) electrostatic type
   d) dynamometer type
16. The current in the pressure coil is proportional to
   a) load current
   b) line current
   c) supply voltage
   d) supply voltage and line current both
17. The current in the pressure coil will lag behind the voltage by 90° because of high
   a) inductance

b) resistance
c) capacitance
d) resistance and low inductance

18. The megger voltage for testing 500 V installation should be
a) 1000 V b) 500 V
c) 300 V d) 250 V

19. Which of the megger is better for testing installation
a) battery operated
b) generator operated
c) integrated circuit operated
d) motor operated

20. Electrostatic instruments are suitable for the measurement of
a) a.c. and d.c. voltage
b) a.c. voltage and current
c) d.c. voltage and current
d) a.c. voltage only

21. Unless otherwise a.c. meters indicate
a) maximum value
b) average value
c) effective value of r.m.s.
d) crest value

22. A wattmeter has four connections. These connection put the fixed coil in
a) parallel with the load and moving coil in series with the load
b) series with the load and moving coil in parallel with the load
c) series-parallel with the load and moving coil in parallel with the load
d) series with the load and moving coil also in series with the load

23. In the above question, the instrument sensitivity is
a) 10 ohm/V b) 20 ohm/V
c) 1 ohm/V d) 0.5 ohm/V

24. Hysteresis in an instrument means
a) the repeatability of the instrument
b) the reliability of the instrument
c) the change in same reading when input is first increased and then decreased
d) the inaccuracy due to change in temperature

25. Sensitivity of a voltmeter is expressed as
a) Volt/Ohms b) Ohms/Volt
c) Ohms Volt d) 1/Ohms. Volt

26. The shunt resistance in an ammeter is usually
a) less than meter resistance
b) equal to meter resistance
c) greater than meter resistance
d) of any value

27. The function of a shunt in an ammeter is to
a) by pass the current
b) increase the current in the coil
c) decrease the voltage drop
d) increase the meter resistance

28. Moving coil instruments are used
a) in a.c. circuits only
b) both in a.c. and d.c. circuits
c) in d.c. circuits only
d) for measuring voltage only

29. In moving-coil meters, damping is provided by
a) the aluminium frame
b) damping vane
c) damping vane in an air tight chamber
d) none of these

30. Megger in its operation is based upon
a) moving-coil meter
b) moving-iron meter
c) dynamo-meter
d) electrostatic meter

31. Megger is an instrument to measure
a) very low resistance
b) insulation resistance
c) Q of a coil
d) inductance of a coil

32. If any two phases of the three-phase supply are interchanged, motor will
a) run in the same direction
b) stop running
c) run in the reverse direction
d) draw high current

33. The rotor of a 3-phase induction motor always runs at
a) synchronous speed
b) less than synchronous speed
c) more than synchronous speed
d) none of these

34. The synchronous speed of the revolving field depends upon
   a) number of poles
   b) supply frequency
   c) flux
   d) a) and b) both are correct

35. In a 3-phase squirrel cage induction motor, the
   a) rotor conductors are kept open
   b) rotor conductors are short circuited through end rings
   c) ends of the rotor conductors are connected to sliping
   d) ends of the rotor conductors are short circuited through slipped

36. In a 3-phase induction motor, internal developed torque, T_e in terms of supply voltage, V_1 is proportional to:
   a) V_1 b) $\sqrt{V_1}$
   c) V_1^2 d) none of these

37. In a 3-phase induction motor, slip for maximum torque, in terms of rotor resistance r_2 :
   a) independent of r_2
   b) directly proportional to r_2
   c) inversely proportional to r_2
   d) none of these

38. In a 3-phase induction motor, the current is produced in the rotor conductors by
   a) giving a.c. supply
   b) giving d.c. supply
   c) induction effect
   d) pulsating d.c. supply

39. The relative speed between the stator and the rotor fluxes is equal to
   a) n_s r.p.m b) $(n_s - n)$ r.p.m
   c) $(n_s + n)$ r.p.m. d) zero r.p.m.

40. In a 3-phase slipring induction motor, the number of poles in the rotor windings are kept
   a) same as of the number of stator poles
   b) more than the number of stator poles
   c) less than then number of stator poles
   d) independent of the stator pole

41. The frequency of the induced e.m.f. in the rotor circuit is
   a) maximum at stand still
   b) zero at stand still
   c) maximum at synchronous speed
   d) none of these

42. Generally, a 3-phase slipring induction motor is started with
   a) D.O.L. starter
   b) Star-delta starter
   c) Auto-transformer starter
   d) Stator-rotor starter

43. A 3-phase squirrel cage induction motor can be started with
   a) Stator rotor starter
   b) D.O.L. starter
   c) Star-Delta starter
   d) D.O.L. and Star Delta Starter both

44. If the full load speed of a 4-pole, 3-phase induction motor is 1440 r.p.m. its speed at half load will be
   a) 1460 r.p.m. b) 1440 r.p.m.
   c) 1400 r.p.m. d) 1000 r.p.m.

45. The power drawn by 3-phase induction motor, when first run in star connection and then in delta connection, will be
   a) same
   b) $\sqrt{3}$ times the power taken in star connection
   c) 3 times the power taken in star connection
   d) $1/\sqrt{3}$ times the power taken in star connection

46. The speed of the slipring induction motor can be controlled by
   a) changing supply frequency
   b) changing number of poles
   c) changing the resistance of the rotor winding
   d) all of these

47. In a 50-Hz, 3-phase induction motor, frequency of rotor current is
   a) 50 b) about 2 Hz
   c) about 10 Hz d) 0 Hz

48. At $s = \infty$ the torque of a 3-phase induction motor is
a) 0 b) small
c) very high d) high

49. Alternator works on the principal of
a) mutual induction
b) Faraday's laws of electro-magnetic induction
c) self induction
d) self and mutual induction

50. The rotor of the alternator requires
a) d.c. b) a.c.
c) pulsating d.c. d) none of the above

51. In larger size alternators, flux is kept
a) stationary
b) rotating
c) either a) or b) is correct
d) none of these

52. The rotor of the alternator has
a) four slip rings
b) three slip rings
c) two slip rings
d) no slip rings

53. The generator which gives d.c. supply to the rotor is called
a) convertor b) exciter
c) invertor d) rectifier

54. Cylindrical pole type rotors are generally used with prime movers of
a) high speed b) low speed
c) medium speed d) low and high speed

55. An alternator running at 3000 r.p.m. generates voltage at 50 Hz. The number of poles of the alternator will be
a) 8 poles b) 6 poles
c) 4 poles d) 2 poles

56. The salient pole type rotors are
a) smaller in axial length
b) larger in axial length
c) smaller in diameter
d) larger in diameter and smaller in axial length

57. The e.m.f. generated in an alternator depends upon
a) coil span factor
b) frequency
c) flux per pole
d) all of the above

58. When the load of an alternator is thrown off, the terminal voltage will
a) increase b) decrease
c) remains same d) none of these

59. The regulation of an alternator is the ratio of
a) $\frac{V_0 - V}{V_0} \times 100\%$ b) $\frac{V_0 - V}{V} \times 100\%$
c) $\frac{V - V_0}{V_0} \times 100\%$ d) $\frac{V - V_0}{V} \times 100\%$

60. The alternators are running in parallel. If the driving force of both the alternators is changed, this will result in change in
a) frequency b) back e.m.f.
c) generated voltage d) all of the above

61. What will be the maximum speed at which the field of an alternator can be operated to develop 60 Hz?
a) 1800 r.p.m. b) 3600 r.p.m.
c) 7200 r.p.m. d) none of these

62. In an alternator when the load increases then the terminal voltage due to armature reaction
a) drops
b) rises
c) either drops or rises
d) does not have any change

63. The longest dam in India
a) Tehri
b) Bhakra Nangal dam
c) Hirakund dam
d) Setusamudram dam

64. The First Thermal Power Plant in India
a) Vidhyachal
b) Narora
c) Hussain Sagar
d) Tarapur

65. The highest dam in India
a) Bhakra Nangal dam
b) Hirakund dam
c) Tehri
d) Krishna

66. Total Transmission and distribution loss occurs in distribution lines in India
a) 85% b) 90%

c) 10% d) 23-25%

67. Total Installed capacity of Tehri Power Plant
a) 100 MW b) 1000 MW
c) 900 MW d) 10 MW

68. Transformer works on the principle of
a) self-induction
b) mutual induction
c) Faraday's law of electromagnetic induction
d) Self and mutual induction both

69. If d.c. supply is given to a transformer it may
a) work
b) not work
c) give lower voltage than the rated voltage on secondary side
d) burn the winding

70. When secondary of the transformer is loaded, the current in the primary side will
a) not be effected
b) increase
c) decrease
d) be the sum of no-load current and excessive current drawn due to the secondary current

71. Which of the statements give below is true for the auto-transformer?
a) It has to separate windings connected in series externally
b) It has only winding
c) It can only step down the voltage
d) It is most suitable for power transformation

72. The use of higher flux density in transformer design
a) increases the weight per kVA
b) decreases the weight per kVA
c) increases the weight per kW
d) decreases the weight per kW

73. What is the phase difference between the low and the high voltage of a YZ5 power transformer?
a) 0° b) 75° c) 5° d) 150°

74. Which is the common method of cooling a power transformer?
a) Air-cooling b) Air-blast cooling
c) Oil-cooling d) Natural cooling

75. What is the typical use of an auto-transformer?
a) Isolating transformer
b) Toy transformer
c) Control transformer
d) Variable transformer

76. In any transformer, the voltage per turn in primary and secondary remains
a) always same
b) always in ratio of K
c) always different
d) sometimes same

77. In any single phase transformer, the primary and secondary induced voltages are
a) 180° out of phase
b) 90° out of phase
c) In phase
d) None of these

78. The no load current taken by actual transformer lags the applied voltage by (approximately)
a) 80° b) 60° c) 50° d) 30°

79. A transformer is working at its maximum efficiency. Its iron-loss is 500 W. Its copper-loss will be
a) 250 W b) 300 W
c) 400 W d) 500 W

80. The special silicon steel is used for laminations because
a) eddy current losses are reduced
b) hysteresis losses are reduced
c) both losses are reduced
d) none of these

81. Cross-over windings are used for
a) high voltage winding of small rating transformers
b) low voltage winding of small rating transformers
c) high voltage winding of large rating transformers
d) none of these

82. Three single-phase transformer, each with a 10 kVA rating are connected in a closed delta arrangement. If one transformer is taken out, the output capacity of the system will be
a) 20 kVA b) 8.66 kVA

c) 17.32 kVA d) 10 kVA

83. Two transformer when operating in parallel will share the load depending upon their
a) magnetising current
b) leakage reactance
c) per unit impedance
d) efficiency

84. The size of transformer core will depend on
a) frequency
b) flux density of the core material
c) area of the core
d) both a and b are current

85. No-load test on a transformer is carried out of determine
a) copper loss
b) full-load current
c) magnetising current
d) efficiency of the transformer

86.When a 400-Hz transformer is operated at 50 Hz, its kVA rating is
a) zero
b) maximum
c) either zero or 100%
d) determined by load on secondary

87. An ideal power transformer will have maximum efficiency at a load such that
a) copper loss is less than iron loss
b) copper loss is equal to iron loss
c) copper loss is higher that iron loss
d) none of these

88. Which of the following types of generators gives constant voltage output at all loads?
a) Series generator
b) Shunt generator
c) Short shunt compound generator
d) Level compound generator

89. A d.c. generator can be termed as
a) rotating amplifier
b) prime mover
c) power pump
d) none of these

90. D.C. series motors are best suited for traction work because
a) torque is proportional to the square of armature current and speed is inversely proportional to torque
b) torque is proportional to the square of armature current and speed is proportional to torque
c) torque and speed are proportional to square of armature current
d) none of these

91. The direction of rotation of d.c. series motor can be reversed by interchanging
a) the supply terminals only
b) the field terminals only
c) the supply as well as field terminals
d) none of these

92. The speed of a series motor at no load is
a) zero b) 3000 rpm
c) 3600 rpm d) infinity

93. The direction of rotation of a d.c. shunt motor is reversed by
a) reversing armature connections
b) interchanging the armature and field connection
c) adding resistance to the field circuit
d) reversing supply connections

94. The armature of d.c. motors is laminated
a) to reduce the hysteresis loses
b) to reduce the eddy current losses
c) to reduce the inductivity of armature
d) to reduce the mass of the armature

95. The current drawn by armature of a d.c. motor is
a) V / R_a b) E_b / R_a
c) $(V - E_b) / R_a$ d) $(E_b - V) / R_a$

96. The torque of a motor is
a) force in N – m acting on the rotor
b) the product of tangential force on the rotor and its radius
c) the electrical power in kW
d) the power given to load being driven by the motor

97. If speed of a d.c. shunt motor increases, the back emf
a) increases
b) decreases
c) remains constant
d) first decreases and then increases

98. The function of a commutator in a d.c. generator is
   a) to collect current from conductors
   b) to change d.c. to a.c.
   c) to conduct the current to the brushes
   d) to change a.c. to d.c.

99. The dummy coil in d.c. machines is used to
   a) eliminate reactance voltage
   b) eliminate armature reaction
   c) bring about mechanical balance of armature
   d) eliminate harmonics developed in the machine

100. The function of the starter in a d.c. machines is
   a) to avoid the excessive current at starting
   b) to control the speed
   c) to avoid armature reaction
   d) to avoid excess heating

101. D.C. shunt generator has
   a) slightly drooping characteristics
   b) appreciably rising characteristics
   c) constant voltage characteristics
   d) appreciably falling characteristics

102. The rotating part of a d.c. motors is known as
   a) pole b) stator
   c) armature d) carbon brush

103. Time constant for an R-L series circuit is given by
   a) R/L b) 1/R.L
   b) R.L c) L/R

104. The direction of the induced current depends upon
   a) the length of the conductor
   b) the speed of the movement of the conductor
   c) the strength of the magnetic field
   d) the direction of the magnetic field

105. What is a simple method of increasing the voltage of an available D.C. generator?
   a) By reducing the air gap flux density
   b) By increasing the speed of rotation
   c) By decreasing the speed of rotation
   d) By increasing the length of the armature

106. The direction of the magnetic lines of forces is
   a) from + to – charges
   b) from south to north pole
   c) from one end of the magnet to the other
   d) from north to south pole

107. A current carrying conductor of length l is under the influence of a magnetic field having a magnetic flux density B. if l is the current flowing through the conductor, which of the following formula is correct for calculating the force exerted on it?

   a) $F = B \times l \times l^2$ b) $F = \frac{B \times l}{l}$

   c) $F = \frac{l \times l}{B}$ d) $F = B \times l \times l$

108. What is meant by permeability?
   a) Strength of a permanent magnet
   b) Strength of an electro magnet
   c) The repulsion of two similar poles
   d) The conductivity of a material for the magnetic flux (magnetic lines of force)

109. The curve representing Ohm's law is
   a) a parabola
   b) sine function
   c) linear
   d) a hyperbola

110. The condition in Ohm's law is that
   a) the temperature should remain constant
   b) ratio V/I should be constant
   c) the temperature should vary
   d) current should be proportional to voltage

111. Voltage, applied across a circuit, acts as
   a) a component of current
   b) a force
   c) mass of electrons
   d) negative ions

112. Kirchoof's law states that in a closed loop of a circuit
   a) That total currents, algebraically summed is zero
   b) The algebraic sum or the potential differences is zero
   c) The voltages across the components is zero

d) None of these

113. Three resistances of 6 ohms each are connected in parallel across 6 V supply, the total resistances of the circuit will be
a) 18 ohms b) 12 ohms
c) 6 ohms d) 2 ohms

114. Two resistances of 4 ohms and 6 ohms are connected in parallel across 12 V supply, the total resistance of the circuit will be
a) 10 ohms b) 2.4 ohms
c) 4.2 ohms d) 5/12 ohms

115. One kilo-calories is equal to
a) 4200 Joules b) 4180 Joules
c) 4.180 Joules d) 4.18×10^2 Joules

116. A current of 5 A flows through a conductor against a potential difference of 200 V. The power dissipated will be
a) 1000 W b) 1.1 K.W
c) 2000 W d) 100 W

117. Energy consumed by an electric iron of rating 1000 W as compared to 750 W will be
a) more b) less
c) half d) same

118. Which of the following material has a negative temperature coefficient
a) aluminium b) silver
c) carbon d) nichrome

119. Which of the following material has the lowest resistivity
a) copper b) aluminium
c) iron d) lead

120. Horse power is the unit of
a) electrical energy b) work
c) power d) force

121. During one year, the population of a locality increases by 5% but during the next year, it decreases by 5%. If the population at the end of the second year was 7980, find the population at the beginning of the first year.
a) 7500 b) 8000
c) 9500 d) 6500

122.The population of a town is 8000. If the males increase by 6% and the females by 10%, the population will be 8600. Find the number of females in the town.
a) 5000 b) 2000
c) 3000 d) 1500

123. The mean temperature from the 9th to the 16th January, both days inclusive, was 11.6° C and from the 10th to the 17th it was 12.2° C. the temperature on the 9th was 10.8° C. What was it on the 17th?
a) 15.6° b) 4.8°C
c) 9.6°C d) 15°C

124. The average of marks obtained by 120 candidates in a certain examination is 35. If the average marks of passed candidates is 39 and that of the failed candidates is 15, what is the number of candidates who passed examination?
a) 100 b) 200
c) 300 d) 400

125.A person divides his total route of journey into three equal parts and decides to travel the three parts with speeds of 40, 30 and 15 km/hr respectively. Find his average speed during the whole journey.
a) 22 b) 24 c) 34 d) 44

126. The average weight of a group of 15 boys was calculated to be 60 kg and it was later discovered that one weight was misread as 24 kg instead of the correct one of 42 kg. The correct average weight is?
a) 60.2 kg b) 61.2 kg
c) 62 kg d) 61 kg

127. The population of a town increased by 20% during the first year, by 25% during the next year and by 44% during the third year. Find the average rate of increase during 3 years.
a) 36.87% b) 37.68%
c) 38.67% d) 34.67%

128. Ten years ago Mohan was thrice as old as Ram was but 10 years hence, he will be only twice as old as Ram. Find Mohan's present age.
a) 72 years b) 70 years
c) 30 years d) Cannot be determined

129.The sum of the age of a vineet and a roshan is 56 years. Also, 4 years ago, the roshan age was 3 times the age of the vinnet. The present ages of the vineet :
a) 15 b) 16
c) 17 d) 18

130. In a certain store, the profit is 320% of the cost price. If the cost increases by 25% but the selling price remains constant, approximately what percentage of the selling price is the profit?
a) 30% b) 70%
c) 100% d) 250%

131. A vendor bought toffees at 6 for a rupee. How many for a rupee must he sell to gain 20%?
a) 3 b) 4 c) 5 d) 6

132.The percentage profit earned by selling an article for Rs. 1920 is equal to the percentage loss incurred by selling the same article for Rs. 1280. At what price should the article be sold to make 25% profit?
a) Rs. 2000 b) Rs. 2200
c) Rs. 2400 d) Rs. 3400

133. A person incurs a loss of 5% be selling a watch for Rs. 1140. At what price should the watch be sold to earn 5% profit.
a) Rs.1200 b) Rs.1230
c) Rs.1260 d) Rs.1290

134. The relative speed of a train in respect of a car is 90 km/h when train and car are moving opposite to each other. Find the actual speed of train, if car is moving with a speed of 15 km/h.
a) 80 km/h
b) 105 km/h
c) 75 km/h
d) 100 km/h

135. A sum of money amounts to Rs. 5200 in 5 years and to Rs. 5680 in 7 years at simple interest. The rate of interest per annum is:
a) 3% b) 4% c) 5% d) 6%

136. Simple interest on a certain sum at a certain annual rate of interest is 25/16 of the sum. If the rate percent per annum and time in years be equal, then rate percent per annum is:
a) 8% b) 11(1/2)%
c) 12(1/2)% d) 12(1/4)%

137. A certain sum of money becomes three times of itself in 20 years at simple interest. In how many years does it become double of itself at the same rate?
a) 8 years b) 10 years
c) 12 years d) 14 years

138. The sum of two numbers is 528 and their H.C.F is 33. What is the number of pairs of such numbers?
a) 4 b) 12 c) 8 d) 6

139. Indian Railways set to launch its first _____ Express train with Wi-Fi, entertainment screens, and vending machines for passengers.
a) Howrah Express
b) Tanjore Express
c) Tejas Express
d) Delhi Express

140. The central government has informed the Supreme Court to provide unique identification number for which animal?
a) Cow b) Goat
c) Horse d) Dog

141. Who wrote 'War and Peace'?
a) Leo Tolstoy
b) Mahatma Gandhi
c) Charles Dickens
d) Kipling

142. Garampani sanctuary is located at
a) Junagarh, Gujarat
b)Diphu, Assam
c) Kohima, Nagaland
d) Gangtok, Sikkim

143. Brass gets discoloured in air because of the presence of which of the following gases in air?
a) Oxygen
b) Hydrogen sulphide
c) Carbon dioxide
d) Nitrogen

144. Which of the following is a non metal that remains liquid at room temperature?
a) Phosphorous b) Bromine
c) Chlorine d) Helium

145. Chlorophyll is a naturally occurring chelate compound in which central metal is
a) copper b) magnesium
c) iron d) calcium

146. Fathom is the unit of
a) sound b) depth
c) frequency d) distance

147. The president addresses both the Houses of Parliament assembled together
a) during emergency session summoned for

the purpose
b) every session
c) first session after each general election and the first session of each year
d) any session

148. The president can dissolve the Lok Sabha on
a) advice of the prime minister
b) advice of the chief justice of India
c) recommendation of Lok Sabha
d) recommendation of the Rajya Sabha

149. Who was the first Indian to win the World Amateur Billiards title?
a) Geet Sethi
b) Wilson Jones
c) Michael Ferreira
d) Manoj Kothari

150. Who was the 1st ODI captain for India?
a) Ajit Wadekar
b) Bishen Singh Bedi
c) Nawab Pataudi
d) Vinoo Mankad

151. Which of the following dances is a solo dance?
a) Ottan Thullal b) Kuchipudi
c) Yakshagana d) Odissi

152. The National Anthem was first sung in the year
a) 1911 b) 1913
c) 1936 d) 1935

153. Find the greatest number that will divide 43, 91 and 183 so as to leave the same remainder in each case.
a) 4 b) 7 c) 9 d) 13

154. The H.C.F. of two numbers is 23 and the other two factors of their L.C.M. are 13 and 14. The larger of the two numbers is:
a) 276 b) 299
c) 322 d) 345

155. Six bells commence tolling together and toll at intervals of 2, 4, 6, 8 10 and 12 seconds respectively. In 30 minutes, how many times do they toll together?
a) 4 b) 10 c) 15 d) 16

156. Find the odd man out.
396, 462, 572, 427, 671, 264
a) 396
b) 427
c) 671
d) 264

157. The angle of elevation of a ladder leaning against a wall is 60º and the foot of the ladder is 4.6 m away from the wall. The length of the ladder is:
a) 2.3 m b) 4.6 m
c) 7.8 m d) 9.2 m

158. Siphon will fail to work if
a) the densities of the liquid in the two vessels are equal
b) the level of the liquid in the two vessels are at the same height
c) both its limbs are of unequal length
d) the temperature of the liquids in the two vessels are the same

159. Nuclear sizes are expressed in a unit named
a) Fermi b) angstrom
c) newton d) tesla

160. Radio telescopes are better than optical telescopes because
a) they can detect faint galaxies which no optical telescope can
b) they can work even in cloudy conditions
c) they can work during the day and night
d) All of the above

Electrical THDC Sample Paper –III Answers Key			
1. b	51. b	101. a	151. a
2. d	52. c	102. c	152. a
3. d	53. b	103. d	153. a
4. d	54. a	104. d	154. c
5. a	55. d	105. b	155. d
6. c	56. d	106. d	156. b
7. c	57. d	107. d	157. d
8. a	58. a	108. d	158. b
9. d	59. b	109. c	159. a
10. c	60. a	110. a	160. d
11. a	61. b	111. b	
12. c	62. c	112. b	
13. d	63. c	113. b	
14. c	64. c	114. b	
15. a	65. c	115. b	
16. c	66. d	116. a	
17. a	67. b	117. a	
18. a	68. d	118. c	
19. b	69. d	119. a	
20. a	70. d	120. c	
21. c	71. b	121. b	
22. b	72. b	122. c	
23. d	73. d	123. a	
24. c	74. d	124. a	
25. b	75. d	125. b	
26. a	76. a	126. b	
27. a	77. c	127. c	
28. c	78. a	128. b	
29. a	79. d	129. b	
30. c	80. b	130. b	
31. b	81. a	131. c	
32. c	82. c	132. a	
33. b	83. c	133. c	
34. d	84. d	134. c	
35. b	85. c	135. d	
36. c	86. a	136. c	
37. b	87. b	137. b	
38. c	88. d	138. a	
39. d	89. a	139. c	
40. a	90. a	140. b	
41. a	91. b	141. b	
42. d	92. d	142. b	
43. d	93. a	143. b	
44. a	94. b	144. b	
45. c	95. c	145. b	
46. d	96. b	146. b	
47. b	97. a	147. c	
48. a	98. d	148. a	
49. b	99. c	149. b	

50. a	100. a	150. a	