

**QUESTION PAPER FOR WRITTEN TEST FOR THE POST OF JE (ELECTRICAL)  
ON COMPASSIONATE GROUND**

**Duration : 2 hrs.**

**Max. Marks: 150**

**Date: 10.9.19**

**Each question is having multiple choice answers out of which only one is correct. Choose the correct alternative. Each question carry one mark. There is no negative marking.**

**Q1. Exposure to sunlight helps a person improve his health because**

- A. the infrared light kills bacteria in the body
- B. resistance power increases
- C. the pigment cells in the skin get stimulated and produce a healthy tan
- D. the ultraviolet rays convert skin oil into Vitamin D

**Q2. Guwahati High Court is the judicature of**

- A. Nagaland
- B. Arunachal Pradesh
- C. Assam
- D. All of the above

**Q3. Friction can be reduced by changing from**

- A. sliding to rolling
- B. rolling to sliding
- C. potential energy to kinetic energy
- D. dynamic to static

**Q4. Fire temple is the place of worship of which of the following religion?**

- A. Taoism
- B. Judaism
- C. Zoroastrianism (Parsi Religion)
- D. Shintoism

**Q5. Film and TV institute of India is located at**

- A. Pune (Maharashtra)
- B. Rajkot (Gujarat)
- C. Pimpri (Maharashtra)
- D. Perambur (Tamilnadu)

**Q6. The ozone layer restricts**

- A. Visible light
- B. Infrared radiation
- C. X-rays and gamma rays
- D. Ultraviolet radiation

**Q7. Filaria is caused by**

- A. Bacteria
- B. Mosquito
- C. Protozoa
- D. Virus

**Q8. Who was the first Indian Chief of Army Staff of the Indian Army ?**

- A. Gen. K.M. Cariappa
- B. Vice-Admiral R.D. Katari
- C. Gen. Maharaja Rajendra Singhji
- D. None of the above

**Q9. For safety, the fuse wire used in the mains for household supply of electricity must be made of metal having**

- A. low melting point
- B. high resistance
- C. high melting point
- D. low specific heat

**Q10. Durand Cup is associated with the game of**

- A. Cricket
- B. Football
- C. Hockey
- D. Volleyball

- Q11. Headquarters of UNO are situated at  
 A. New York, USA      B. Hague (Netherlands)      C. Geneva      D. Paris
- Q12. For purifying drinking water alum is used  
 A. for coagulation of mud particles      B. to kill bacteria  
 C. to remove salts      D. to remove gases
- Q13. Fa-Hien was  
 A. the first Buddhist pilgrim of China to visit India during the reign of Chandragupta Vikramaditya  
 B. the discoverer of Puerto Rico and Jamaica  
 C. the first Buddhist pilgrim of India to visit China  
 D. None of the above
- Q14. India has largest deposits of \_\_\_\_\_ in the world.  
 A. gold      B. copper      C. mica      D. None of the above
- Q15. India's first nuclear blast at Pokhran in Rajasthan took place in  
 A. 1984      B. 1974      C. 1964      D. 1954
- Q16. Jeevan Rekha (Life line) express is  
 A. first hospital on wheels in the world      B. first railway express  
 C. oldest train      D. None of the above
- Q17. Richter scale is used for measuring  
 A. density of liquid      B. intensity of earthquakes  
 C. velocity of wind      D. humidity of air
- Q18. The first Indian and Asian to receive the Noble Prize in Physics was  
 A. C.V. Raman      B. Mother Teresa      C. Rabindranath Tagore      D. S. Chandrasekhar
- Q19. The largest cantilever bridge of India is  
 A. Chambal Bridge      B. Mahatama Gandhi Setu      C. Howrah Bridge      D. None of the above
- Q20. The refrigerant commonly used for domestic refrigerators is  
 A. alcohol      B. ammonia      C. neon      D. None of the above
- Direction (21-25) Eight executives - H, I, J, K, L, M, N & P are sitting around a circular table. M . M is third to the right of J & second to the left of K. H is at immediate left of I. P is at immediate right of K. L is third to the left of N.
- Q.21. Which of the following pair of persons shows the nearest neighbour of 'M'?  
 (A) K, I      (B) L, I      (C) H, I      (D) H, L
- Q.22. In which of the following pairs, second person is second to the right of first person?  
 (A) LI      (B) NL      (C) PJ      (D) None of these
- Q.23. Which of the following is definitely correct?  
 (A) K is at immediate right to P      (B) P is second to the right of J  
 (C) H is at immediate left of J      (D) None of these

Q.24. Who is at immediate right of J?

- (A) L (B) I (C) N (D) H

Q.25 Who is second to the left of M?

- (A) H (B) P (C) J (D) K

Q.26. Pituitary : Brain :: Thymus : ?

- (A) Larynx (B) Spinal Cord (C) Throat (D) Chest

Q.27. Blunt : Sharp :: Sow : ?

- (A) Water (B) Crow (C) Farm (D) Reap

Q.28. Amnesia : Memory :: Paralysis : ?

- (A) Movement (B) Limbs (C) Handicapped (D) Legs

Q.29. Book : Publisher :: Film : ?

- (A) Producer (B) Director (C) Editor (D) Writer

Q.30. Influenza : Virus :: Typhoid : ?

- (A) Bacillus (B) Parasite (C) Protozoa (D) Bacteria

Q.31. KUZ, MOX, OIV, QET....?

- (A) SUR (B) SDR (C) SMR (D) SAR

Q.32. SHG, RIF, QJE, PKD, ?

- (A) OLE (B) OLC (C) NMC (D) NLB

Q 33. In a certain code LAWN is written as JCUP. How will SLIT be coded in that code?

- (a) QNGV (b) QJGV (c) QNVG (d) NJGV

Q 34. In a certain code CONCISE is written as FTJBBNM. How is FISHERY written in that code?

- (a) ZSFIGJT (b) ZSFGIHR (c) ZSFGHR (d) ZSFEHGR

Q 35. Raj travelled from a point X straight to Y at a distance of 80 metres. He turned right and walked 50 metres, then again turned right and walked 70 metres. Finally, he turned right and walked 50 metres. How far is he from the starting point?

- (a) 10 metres (b) 20 metres (c) 50 metres (d) 70 metres

Q 36. The speed of the train going from Nagpur to Allahabad is 100 km/h while when coming back from Allahabad to Nagpur, its speed is 150 km/h. find the average speed during whole journey.

- A. 125 km/hr B. 75 km/hr C. 135 km/hr D. 120 km/hr

Q 37. The average of 20 students is 12 years, if the teacher's age is included, average increases by one. The age of the teacher is:

- A. 30 yrs B. 33 yrs. C. 28 yrs D. 35 yrs.

Q 38. Rs. 1200 is lent out at 5% per annum simple interest for 3 years. Find the amount after 3 years.

- A. Rs. 1380      B. Rs. 1290      C. Rs. 1470      D. Rs.1200      E. Rs. 1240

Q 39. Interest obtained on a sum of Rs. 5000 for 3 years is Rs. 1500. Find the rate percent.

- A. 8%      B. 9%      C. 10%      D. 11%      E. 12%

Q 40. Rs. 2100 is lent at compound interest of 5% per annum for 2 years. Find the amount after two years.

- A. Rs. 2300      B. Rs. 2315.25      C. Rs. 2310      D. Rs. 2320      E. None of these

Q 41. Find the least number which will leaves remainder 5 when divided by 8, 12, 16 and 20.

- A. 240      B. 245      C. 265      D. 235

Q 42. 1.14 expressed as a per cent of 1.9 is:

- A. 6%      B. 10%      C. 60%      D. 90%

Q 43. In an examination 80% candidates passed in English and 85% candidates passed in Mathematics. If 73% candidates passed in both these subjects, then what per cent of candidates failed in both the subjects?

- A. 8      B. 15      C. 27      D. 35

Q 44. The cost of an article was Rs.75. The cost was first increased by 20% and later on it was reduced by 20%. The present cost of the article is:

- A. Rs. 72      B. Rs. 60      C. Rs. 75      D. Rs. 76

Q 45. The number of students in 3 classes is in the ratio 2 : 3 : 4. If 12 students are increased in each class this ratio changes to 8 : 11 : 14. The total number of students in the three classes in the beginning was

- A. 162      B. 108      C. 96      D. 54

Q 46. If  $a : b : c = 3 : 4 : 7$ , then the ratio  $(a + b + c) : c$  is equal to

- A. 2 : 1      B. 14 : 3      C. 7 : 2      D. 1 : 2

Q 47. If  $A : B = 2 : 3$  and  $B : C = 4 : 5$  then  $A : B : C$  is

- A. 2 : 3 : 5      B. 5 : 4 : 6      C. 8 : 12 : 15      D. 6 : 4 : 5

Q 48. A man completes a certain journey by a car. If he covered 30% of the distance at the speed of 20kmph, 60% of the distance at 40km/h and the remaining of the distance at 10 kmph, his average speed is:

- A. 25 km/h      B. 28 km/h      C. 30 km/h      D. 33 km/h

Q 49. An athlete runs 200 meters race in 24 seconds. His speed in km/h is

- A. 20      B. 24      C. 28.5      D. 30

Q 50. By selling a bicycle for Rs. 2,850, a shopkeeper gains 14%. If the profit is reduced to 8%, then the selling price will be:

- A. Rs. 2600      B. Rs. 2700      C. Rs. 2800      D. Rs. 3000

Q 51. If a man were to sell his chair for Rs. 720, he would lose 25%. To gain 25% he should sell it for:  
A. Rs. 1,200                      B. Rs. 1,000                      C. Rs. 960                      D. Rs. 900

Q 52. If A and B together can complete a piece of work in 15 days and B alone in 20 days, in how many days can A alone complete the work?  
A. 60                      B. 45                      C. 40                      D. 30

Q 53. A and B together can complete a work in 3 days. They start together but after 2 days, B left the work. If the work is completed after two more days, B alone could do the work in  
A. 5 days                      B. 6 days                      C. 9 days                      D. 10 days

Q 54. A boat can travel with a speed of 13 km/hr in still water. If the speed of the stream is 4 km/hr, find the time taken by the boat to go 68 km downstream.  
A. 2 hours                      B. 3 hours                      C. 4 hours                      D. 5 hours                      E. None of these

Q 55. Three numbers are in the ratio of 3 : 4 : 5 and their L.C.M. is 2400. Their H.C.F. is:  
A. 40                      B. 80                      C. 120                      D. 200

Q 56. Speed of data transmission in 4-G network of telecom is  
A. 386 kbps - 2 mbps.                      B. 2 mbps.                      C. 2 mbps - 1 gbps.                      D. 100 mbps - 1 gbps.

Q 57. In electronic communications, "AM" stands for  
A. Amp Modification                      B. Amplitude Method                      C. Amplitude Modulation                      D. Ampere Method

Q 58. When converting 7,000 nA to microamperes, the result is  
A. 0.007  $\mu$ A                      B. 0.7  $\mu$ A                      C. 700  $\mu$ A                      D. 7  $\mu$ A

Q 59. A 5 mH, a 4.3 mH, and a 0.6 mH inductor are connected in parallel. The total inductance is  
A. less than 0.6 mH                      B. 9.9 mH or greater than 5 mH  
C. greater than 5 mH                      D. 9.9 mH

Q 60. You are measuring the current in a circuit that is operated on an 18 V battery. The ammeter reads 40 mA. Later you notice the current has dropped to 20 mA. How much has the voltage changed?  
A. 18 V                      B. 0 V                      C. 900 mV                      D. 9 V

Q 61. The current through a 120 mH coil is changing at a rate of 150 mA/s. The voltage induced across the coil is  
A. 18 mV                      B. 2.5 mV                      C. 180 mV                      D. 1.8 mV

Q 62. A sine wave voltage is applied across an inductor. When the frequency of the voltage is decreased, the current  
A. is increased                      B. is decreased                      C. does not change                      D. momentarily goes to zero

Q 63. Five resistors are connected in a series and there is a current of 3 A into the first resistor. The amount of current into the second resistor is  
A. 3A                      B. 2A                      C. 4A                      D. 7A

Q64. Three lights are connected in parallel across a 120 volt source. If one light burns out,

- A. the remaining two will glow with the same brightness as before
- B. the remaining two will not light
- C. the remaining two will glow brighter
- D. the remaining two will glow dimmer

Q65. If one of the resistors in a parallel circuit is removed, the total resistance

- A. remains the same
- B. doubles
- C. increases
- D. decreases

Q66. A sudden increase in the total current into a parallel circuit may indicate

- A. an increase in source voltage
- B. a drop in source voltage
- C. either a drop in source voltage or an open resistor
- D. an open resistor

Q67. An electric current of 5 A is same as

- A. 5 w / sec.
- B. 5 C / sec
- C. 5 V / C
- D. 5 J / C

Q68. Which method can be used for absolute measurement of resistances ?

- A. Releigh method
- B. Wheatstone bridge method
- C. Ohm's law method
- D. Lorentz method.

Q69. The ability of a material to remain magnetized after removal of the magnetizing force is known as

- A. permeability
- B. hysteresis
- C. retentivity
- D. reluctance

Q70. When the speed at which a conductor is moved through a magnetic field is increased, the induced voltage

- A. reaches zero
- B. remains constant
- C. decreases
- D. increases

Q71. The induced voltage across a stationary conductor in a stationary magnetic field is

- A. reversed in polarity
- B. decreased
- C. zero
- D. increased

Q72. A coil of wire is placed in a changing magnetic field. If the number of turns in the coil is decreased, the voltage induced across the coil will

- A. increase
- B. decrease
- C. remain constant
- D. be excessive

Q73. If the peak of a sine wave is 13 V, the peak-to-peak value is

- A. 13 V
- B. none of the above
- C. 26 V
- D. 6.5 V

Q74. When a sine wave has a frequency of 100 Hz in 12 s it goes through

- A. 1,200 cycles
- B. 120 cycles
- C. 12 cycles
- D. 1/100 cycle

Q75. If the primary power of an ideal transformer having a 2:1 voltage ratio is 100 W, the secondary power is

- A. 50 W
- B. 100 W
- C. 200 W
- D. 75 W

Q76. When does maximum power transfer happen from the source to the load?

- A. When the source resistance equals the load resistance
- B. When the source resistance is greater than the load resistance
- C. When the source resistance is less than the load resistance
- D. When there is negligible source resistance

Q77. In an Auto Transformer, The Primary and Secondary are \_\_\_\_\_ Coupled.

- A. Only Magnetically
- B. Only Electrically
- C. None of the above
- D. Magnetically as well as Electrically

Q78. In Three Phase Transformer, The load Current is 139.1A, and Secondary Voltage is 415V. The Rating of the Transformer would be \_\_\_\_\_.

- A. 50kVA
- B. 173kVA
- C. 100kVA
- D. 57.72kVA

Q79. What would happen if a power transformer designed for operation on 50 Hz (frequency) were connected to a 5 Hz (frequency) source of the same voltage?

- A. No effect
- B. Eddy Current and Hysteresis loss will be excessive
- C. Transformer may start to smoke
- D. Current will be too much low

Q80. An Isolation Transformer Has Primary to Secondary turns ratio of \_\_\_\_\_.

- A. 1 : 1
- B. 2 : 1
- C. Can be any ratio
- D. 1 : 2

Q81. Laminated insulations coated with varnish are normally used in the transformer

- A. To reduce the hysteresis effect
- B. To reduce the effect of eddy current
- C. To reduce reluctance of magnetic path
- D. To increase the reluctance of magnetic path

Q82. In a three-phase system, when the loads are perfectly balanced, the neutral current is

- A. two-thirds of maximum
- B. one-third of maximum
- C. at maximum
- D. zero

Q83. If you used 400 W of power for 30 h, you have used

- A. 12 kWh
- B. 1.2 kWh
- C. 13.3 kWh
- D. 1.3 kWh

Q84. Negative feedback in an amplifier

- A. Reduces gain
- B. Increase frequency & phase distortion
- C. Reduces bandwidth
- D. Increases noise

Q85. In control systems the output of sensor usually, is

- A. Analog electrical signal
- B. Digital electrical signal
- C. Mechanical signal
- D. Analog or digital electrical signal

Q86. The universal gate is \_\_\_\_\_

- A. NAND gate
- B. OR gate
- C. AND gate
- D. None of the above

Q87. In which of the following base systems is 123 not a valid number?

- A. Base 10
- B. Base 16
- C. Base 8
- D. Base 3

Q88. The forbidden energy gap between the valence band and conduction band will be least in case of

- A. Metals
- B. Semiconductors
- C. Insulators
- D. All of the above

Q89. A thermistor is a

- A. Thermocouple
- B. Thermometer
- C. Miniature resistance
- D. Heat sensitive explosive

Q90. In an ideal diode there is no breakdown, no \_\_\_\_\_ current, and no forward \_\_\_\_\_ drop.

- A. Reverse, voltage
- B. Forward, current
- C. Forward, voltage
- D. Reverse, current

Q91. In a half wave rectifier, the load current flows

- A. Only for the positive half cycle of the input signal
- B. Only for the negative half cycle of the input signal
- C. For full cycle
- D. For less than fourth cycle

Q92. The spring material used in a spring control device should have the following property.

- A. Should be nonmagnetic
- B. Must be of low temperature coefficient
- C. Should have low specific resistance
- D. All of the above

Q93. Which of the following meters has a linear scale?

- A. Thermocouple meter
- B. Moving iron meter
- C. Hot wire meter
- D. Moving coil meter

Q94. A CRO can display

- A. AC signals
- B. DC signals
- C. Both AC and DC signals
- D. Time invariant signals

Q95. A megger is usually

- A. Moving iron type instrument
- B. Electro-static type instrument
- C. Hot-wire type instrument
- D. Moving coil type instrument

Q96. The internal resistance of an ammeter should be

- A. Very small
- B. Medium
- C. High
- D. Infinity

Q97. A closed path made by several branches of the network is known as

- A. Branch
- B. Loop
- C. Circuit
- D. Junction

Q98. Application of Norton's theorem to a circuit yields

- A. Equivalent current source and impedance in series
- B. Equivalent current source and impedance in parallel
- C. Equivalent impedance
- D. Equivalent current source

Q99. An ideal voltage source has

- A. Zero internal resistance
- B. Open circuit voltage equal to the voltage on full load
- C. Terminal voltage in proportion to current
- D. Terminal voltage in proportion to load

Q100. The five flags in 8085 are designated as

- A. Z, CY, S, P and AC
- B. D, Z, S, P, AC
- C. Z, C, S, P, AC
- D. Z, CY, S, D, AC

Q101. If the input to an integrating circuit is a succession of alternating positive and negative pulses of very short duration, the output will be \_\_\_\_\_ wave

- A. Rectangular
- B. Triangular
- C. Sine
- D. Square

Q102. In direct cooled system using hydrogen both stator and rotor conductors are made

- A. solid
- B. hollow
- C. perforated
- D. any of the above



Q103. The value of exciting or magnetizing current depends upon which of the following factors ?

- A. Total m.m.f. required  
B. The number of turns in the exciting winding  
C. The way in which the winding is distributed  
D. All of the above

Q104. The design of mechanical parts is particularly important in case of \_\_\_\_\_ speed machines.

- A. low  
B. medium  
C. high  
D. any of the above

Q105. Which of the following generators will be preferred if they are required to be run in parallel?

- A. Shunt generators  
B. Series generators  
C. Compound generators  
D. None of the above

Q106. The demagnetizing component of armature reaction in a D.C. generator

- A. Reduces generator e.m.f.  
B. Increases armature speed  
C. Reduces interpoles flux density  
D. Results in sparking trouble

Q107. According to Fleming's right-hand rule for finding the direction of induced e.m.f., when middle finger points in the direction of induced e.m.f., forefinger will point in the direction of

- A. Motion of conductor  
B. Lines of force  
C. Either of the above  
D. None of the above

Q108. The condition for maximum efficiency for a D.C. generator is

- A. Eddy current losses = stray losses  
B. Hysteresis losses = eddy current losses  
C. Copper losses = 0  
D. Variable losses = constant losses

Q109. If a D.C. motor is connected across the A.C. supply it will

- A. Run at normal  
B. Not run  
C. Run at lower speed  
D. Burn due to heat produced in the field winding by eddy currents

Q110. The armature voltage control of D.C. motor provides

- A. Constant torque drive  
B. Constant voltage drive  
C. Constant current drive  
D. None of the above

Q111. The term 'cogging' is associated with

- A. Three-phase transformers  
B. Compound generators  
C. D.C. series motors  
D. Induction motors

Q112. For which of the following applications a D.C. motor is preferred over an A.C. motor?

- A. Low speed operation  
B. High speed operation  
C. Variable speed operation  
D. Fixed speed operation

Q113. For an EHV equipment for maintenance first it should be isolated and connected to ground because

- A. to provide low impedance  
B. to discharge the charging capacitance to ground  
C. protection for operating personnel  
D. both (B) and (C)

Q114. Earth wire or ground wire is made of

- A. copper  
B. aluminium  
C. iron  
D. galvanized steel

Q115. Rotor rheostat control method of speed control is used for

- A. Squirrel-cage induction motors only  
B. Slip ring induction motors only  
C. Both (A) and (B)  
D. None of the above

Q116. A double squirrel-cage induction motor has

- A. Two rotors moving in opposite direction
- B. Two parallel windings in stator
- C. Two parallel windings in rotor
- D. Two series windings in stator

Q117. A 3-phase induction motor stator delta connected, is carrying full load and one of its fuses blows out. Then the motor

- A. Will continue running burning its one phase
- B. Will continue running burning its two phases
- C. Will stop and carry heavy current causing permanent damage to its winding
- D. Will continue running without any harm to the winding

Q118. When the stator windings are connected in such a fashion that the number of poles are made half, the speed of the rotor of a synchronous motor

- A. remains same as the original value
- B. decreases to half the original value
- C. tends to become zero
- D. increases to two times the original value

Q119. The speed of a synchronous motor

- A. increases as the load increases
- B. decreases as the load decreases
- C. always remains constant
- D. none of the above

Q120. Which of the following losses, in a synchronous motor, does not vary with load?

- A. Windage loss
- B. Copper losses
- C. Any of the above
- D. None of the above

Q121. For V-curves for a synchronous motor the graph is drawn between

- A. field current and armature current
- B. terminal voltage and load factor
- C. power factor and field current
- D. armature current and power factor

Q122. While preparing electrolyte for a lead-acid battery

- A. water is poured into acid
- B. acid is poured into water
- C. any one of the two can be added to other chemical
- D. none of the above

Q123. Electrolyte used in a lead-acid cell is

- A. NaOH
- B. only  $H_2SO_4$
- C. only water
- D. dilute  $H_2SO_4$

Q124. The capacity of a lead-acid cell is measured in

- A. amperes
- B. ampere-hours
- C. watts
- D. watt-hours

Q125. The effect of sulphation is that the internal resistance

- A. increases
- B. decreases
- C. remains same
- D. none of the above

Q126. Which of the following motors is used in mixies ?

- A. Repulsion motor
- B. Reluctance motor
- C. Hysteresis motor
- D. Universal motor

Q127. Which of the following is usually not the generating voltage?

- A. 6.6 kV
- B. 8.8 kV
- C. 11 kV
- D. 13.2 kV

Q128. A 3-phase 4-wire system is commonly used on

- A. Primary transmission
- B. Secondary transmission
- C. Primary distribution
- D. Secondary distribution

Q129. Overhead lines generally use

- A. Copper conductors
- B. All aluminium conductors
- C. A.C.S.R. conductors
- D. None of these

Q130. Low voltage cables are meant for use up to

- A. 1.1 kV
- B. 3.3 kV
- C. 6.6 kV
- D. 11 kV

Q131. A Buchholz relay can be installed on

- A. auto-transformers
- B. air-cooled transformers
- C. welding transformers
- D. oil cooled transformers

Q132. A phasor represents

- A. The magnitude and a quantity direction
- B. The width of a quantity
- C. The phase angle
- D. The magnitude of a quantity

Q133. The full-load copper loss of a transformer is 1600 W. At half-load, the copper loss will be

- A. 6400 W
- B. 1600 W
- C. 800 W
- D. 400 W

Q134. Part of the transformer which is most subject to damage from overheating is

- A. iron core
- B. copper winding
- C. winding insulation
- D. frame or case

Q135. A hole and electron in close proximity would tend to \_\_\_\_\_

- A. Repel each other
- B. Attract each other
- C. Have no effect on each other
- D. None of the above

Q136. A pentavalent impurity has \_\_\_\_\_ Valence electrons

- A. 3
- B. 5
- C. 4
- D. 6

Q137. A reverse biased pn junction has resistance of the order of

- A.  $\Omega$
- B.  $k\Omega$
- C.  $M\Omega$
- D. None of the above

Q138. For blowers which of the following motor is preferred?

- A. D.C. series motor
- B. D.C. shunt motor
- C. Squirrel cage induction motor
- D. Wound rotor induction motor

Q139. The material of the heating element for a furnace should have

- A. Lower melting point
- B. Higher temperature coefficient
- C. High specific resistance
- D. All of the above

Q140. In induction heating \_\_\_\_\_ is abnormally high.

- A. Phase angle
- B. Frequency
- C. Current
- D. Voltage

Q141. Which of the following heating methods has maximum power factor?

- A. Arc heating
- B. Dielectric heating
- C. Induction heating
- D. Resistance heating

Q142. A thermal protection switch can protect against

- A. short-circuit      B. temperature      C. overload      D. over voltage

Q143. Which of the following devices will receive voltage surge first travelling on the transmission line ?

- A. Lightning arresters      B. Relays      C. Step-down transformer      D. Switchgear

Q144. \_\_\_\_\_ is invariably used as base load plant.

- A. Diesel engine plant      B. Nuclear power plant      C. Gas turbine plant      D. Pumped storage plant

145. For which of the following 'ampere second' could be the unit?

- A. Reluctance      B. Charge      C. Power      D. Energy

Q146 .In questions , select the one which is different from other three alternatives

- A. Barter      B. Purchase      C. Sale      D. Borrow

Q147 .In questions, find out the wrong number in the series.

52, 51, 49, 46, 41, 37

- A. 49      B. 51      C. 37      D. 41

Q148 .In an imaginary operation of mathematics, '+' means multiply, 'x' means subtract, '÷' means add and '-' means divide. In this operation of mathematics all other rules are same as in present system.

Which of these is the answer to the following ?

$175 - 25 \div 5 + 20 \times 3 + 10$

- A. 160      B. 2370      C. 77      D. 240

Q149 .Some statements are given followed by two conclusions I and II. You have to consider the statements to be true, even if they seem to be at variance from commonly known facts. You are to decide which of the given conclusions can definitely be drawn from the given statements. Indicate your answer

Statement:

All Cat is mouse

All mouses are dogs

Conclusion:

I. Some cats are dogs

II. No cat is dog.

- A. Only Conclusion I follows      B. Both conclusion I and II follow  
C. Neither Conclusion I nor II follows      D. Only Conclusion I or either I or II follows

Q150 .Arrange the following words according to dictionary :

1. Exploit
2. Explosive
3. Exponent
4. Exposition
5. Explore

- A. 1, 3, 4, 5, 2      B. 1, 5, 2, 3, 4      C. 1, 5, 3, 2, 4      D. 1, 2, 5, 3, 4