

QUESTION PAPER FOR SUITABILITY FOR APPOINTMENT TO THE POST OF JE (ELECTRICAL)
ON COMPASSIONATE GROUND ON 17.7.2020

Duration: 2 hrs.

Max. Marks: 150

Date : 17.7.2020

Instructions to Candidates:

- 1) All questions carry 01 mark each.
- 2) All questions are of multiple choice questions in which only one answer is correct. Choose the correct answer.
- 3) There is no negative marking.
- 4) All questions are compulsory
- 5) In case of discrepancy in meaning between English and Hindi questions, English version will stand good.

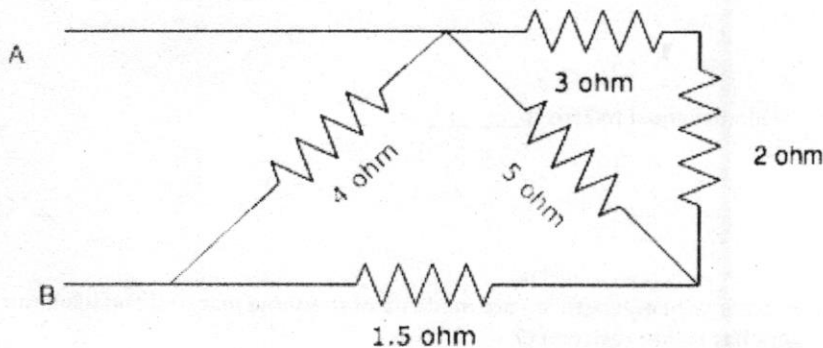
01. Purely mechanical instrument cannot be used for dynamic measurements because they have

- A. high inertia.
- B. higher response time.
- C. large time constant.
- D. all of the above.

02. Batteries are generally connected in _____

- A. Series
- B. Parallel
- C. Either series or parallel
- D. Neither series nor parallel

03. Calculate the equivalent resistance between A and B.



- A. 2 ohm
- B. 4 ohm
- C. 6 ohm
- D. 8 ohm

04. KCL deals with the conservation of?

- A. Momentum
- B. Mass
- C. Potential Energy
- D. Charge

05. KCL is applied at _____

- A. Loop
- B. Node
- C. Both loop and node
- D. Neither loop nor node

06. Which of the following is not an expression power?

- A. $P=VI$
- B. $P=I^2R$
- C. $P=V^2/R$
- D. $P=I/R$

07. Calculate the work done in a resistor of 20 ohm carrying 5A of current in 3 hours.

- A. 1.5J
- B. 15J
- C. 1.5kWh
- D. 15kWh

08. The resistance of insulators _____

- A. Increases with an increase in temperature
- B. Decreases with an increase in temperature
- C. Remains the same with an increase in temperature
- D. Becomes zero with an increase in temperature

09. A copper coil has a resistance of 200 ohms when its mean temperature is 0 degree centigrade. Calculate the resistance of the coil when its mean temperature is 80 degree centigrade. Temperature coefficient of copper is $0.004041\text{centigrade}^{-1}$

- A. 264.65ohm
- B. 264.65kilo-ohm
- C. 286.65ohm
- D. 286.65kilo-ohm

10. If the temperature is increased in semi-conductors such that the resistance incessantly falls, it is termed as _____

- A. Avalanche breakdown
- B. Zener breakdown
- C. Thermal runaway
- D. Avalanche runaway

11. Materials having resistance almost equal to zero is _____

- A. Semi-conductor
- B. Conductor
- C. Superconductors
- D. Insulators

12. A wire of length 2m and another wire of length 5m are made up of the same material and have the same area of cross section, which wire has higher resistance?

- A. Both have equal resistance
- B. The 2m wire has higher resistance
- C. The 5m wire has higher resistance
- D. The value of resistance cannot be determined from the given data

13. Calculate the ratio of the resistivity of 2 wires having the same length and same resistance with area of cross section 2m^2 and 5m^2 respectively.

- A. 5:7
- B. 2:7
- C. 2:5
- D. 7:5

14. Which of the following statements are true with regard to resistivity?

- A. Resistance depends on the temperature
- B. Resistance does not depend on the temperature
- C. Resistivity depend on the length
- D. Resistivity depend on area of cross section

15. KVL deals with the conservation of?

- A. Mass
- B. Momentum
- C. Charge
- D. Energy

16. The sum of the voltages over any closed loop is equal to _____

- A. 0V
- B. Infinity
- C. 1V
- D. 2V

17. Out of the following, which one is not a source of electrical energy?

- A. Solar cell
- B. Battery
- C. Potentiometer
- D. Generator

18. Practically, if 10kJ of energy is supplied to a device, how much energy will the device give back?

- A. Equal to 10kJ
- B. Less than 10kJ
- C. More than 10kJ
- D. Zero

19. A bulb has a power of 200W. What is the energy dissipated by it in 5 minutes?

- A. 60J
- B. 1000J
- C. 60kJ
- D. 1kJ

20. Under no-load condition power drawn by the prime mover of an alternator goes to

- A. produce induced emf in armature winding
- B. meet no-load losses
- C. produce power in armature
- D. meet Cu losses both in armature and rotor windings

21. At lagging loads, armature reaction in an alternator is

- A. cross-magnetising
- B. demagnetizing
- C. non-effective
- D. magnetising

22. The generator which gives dc supply to the rotor of an alternator is called

- A. convertor
- B. exciter
- C. inverter
- D. rectifier

23. An alternator running at 1000 rpm generates voltage at 50 Hz. The number of poles on the alternator will be

- A. 2
- B. 4
- C. 6
- D. 8

24. Turbo-alternators are generally used to run at

- A. 1500 r.p.m.
- B. 3000 r.p.m.
- C. 5000 r.p.m.
- D. 15000 r.p.m.

25. For a given line voltage, four heating coils will produce maximum heat when connected

- A. all in parallel
- B. all in series
- C. with two parallel pairs in series
- D. one pair in parallel with the other two in series

26. If a 'live' conductor of a public supply touches earth metal

- A. supply voltage will increase
- B. supply voltage will decrease
- C. no current will flow
- D. current will flow to earth

27. The material used for fuse must have

- A. low melting point and low specific resistance
- B. low melting point and high specific resistance
- C. high melting point and low specific resistance.
- D. None of the above

28. Which of the following stays the same in all parts of a series circuit?

- A. voltage
- B. power
- C. resistance
- D. current

29. When one leg of a parallel circuit gets opened out, the current drawn from the supply will

- A. reduce
- B. increase
- C. remain the same
- D. uncertain

30. When a rectangular voltage waveform is applied to a capacitor, the waveform of its charging current is

- A. sinusoidal
- B. sawtooth
- C. rectangular
- D. none of the above

31. The number of 2 pF, 400 V capacitors needed to obtain a capacitance value of 1.511F rated for 1,600 V is

- A. 12
- B. 8
- C. 6
- D. 4

32. Electric flux inside a conducting sphere is

- A. zero
- B. uniform
- C. minimum
- D. maximum

33. The following law relates the forces experienced by two loops of wires carrying current

- A. Coulomb's law
- B. Ampere's law
- C. Newton's law
- D. Laplace Equation

34. Alternating voltages and currents are expressed in r.m.s. values because

- A. they can be easily determined
- B. calculations become very simple
- C. they give comparison with d.c.
- D. none of the above

35. A DC generator generates

- A. DC voltage
- B. AC voltage
- C. DC and ac voltage
- D. pulsating DC

36. The sole purpose of commutator in a dc generator is to

- A. increase output voltage
- B. reduce sparking at brushes
- C. provide smoother output
- D. convert the induced alternating voltage into unidirectional pulses

37. All rotating electric machines are basically

- A. d.c. machines
- B. a.c. machines
- C. electro-mechanical convertors
- D. machines using electromagnetic induction

38. Which of the following parts helps the commutation process?

- A. interpoles
- B. compensating winding
- C. pole shoes
- D. all of these

39. The rotating part knows is

- A. pole
- B. stator
- C. armature
- D. commutator

40. A 400-kW, 3-phase, 440-V, 50-Hz induction motor has a speed of 950 r.p.m. on full-load. The machine has 6 poles. The slip of the machine will be

- A.0.06 B.0.1 C.0.04 D.0.05

41. The crawling in an induction motor is caused by

- A. improper design of the machine
- B. low voltage supply
- C. high loads
- D. harmonics developed in the motor

42. In some induction motors, copper bars are placed deep in the rotor. It is done so that

- A. slip under normal running conditions is reduced
- B. P.F. is improved
- C. starting torque is increased
- D. output is increased

43. For which motor the speed can be controlled from rotor side?

- A. Squirrel-cage induction motor
- B. Slip-ring induction motor
- C. Both (a) and (b)
- D. None of the above

44. An induction motor is

- A. self-starting with zero torque
- B. self-starting with high torque
- C. self-starting with low torque
- D. non-self starting

45. The maximum torque in an induction motor depends on

- A. frequency
- B. rotor inductive reactance
- C. square of supply voltage
- D. all of the above

46. DOL starting of induction motor is usually restricted to

- A. low horsepower motors
- B. variable speed motors
- C. high horsepower motors
- D. high speed motors

47. The speed of a squirrel-cage induction motor can be controlled by all of the following except

- A. changing supply frequency
- B. changing number of poles
- C. changing winding resistance
- D. reducing supply voltage

48. The power factor of an induction motor under no-load conditions will be closer to

- A. 0.2 lagging
- B. 0.2 leading
- C. 0.5 leading
- D. unity

49. In a 3-phase induction motor which of the following statements, regarding frequency of induced rotor e.m.f. is incorrect?

- A. Its speed varies inversely as slip
- B. It is zero at synchronous speed
- C. It is directly dependent on slip
- D. It is maximum at standstill

50. Transient current in electrical circuits are associated with

- A. inductors
- B. capacitors
- C. resistors
- D. both (a) and (b)

51. The order of the lightning discharge current is :

- A. 10,000 amp
- B. 100 amp
- C. 1 amp
- D. 1 microampere

52. Which of the following generating station has the minimum running cost?

- A. hydro-electric station
- B. nuclear power station
- C. thermal power station
- D. diesel power plant

53. The EHV system is one operating beyond

- A. 11 kV
- B. 132 kV
- C. 200 kV
- D. 400 kV

54. Causes of low power factor are

- A. induction motors and arc lamp loads
- B. generating equipment during low loads
- C. industrial heating furnaces and arc furnaces
- D. both A and C above

55. Drawbacks of low power factor are

- A. high ratings of generating, transmitting and distributing equipment
- B. large voltage drop and poor voltage regulation
- C. large copper losses and high capital costs
- D. all of these

56. Power factor of a power system can be improved by

- A. using phase advances, static capacitors, capacitance boosters
- B. unexcited synchronous motors on load
- C. over excited synchronous motors on no load
- D. both A and B above

57. Corona is observed on

- A. a.c. transmission lines only
- B. d.c. transmission lines only
- C. both a.c. and d.c. transmission lines
- D. none of these

58. The following medium is employed for extinction of arc in air break circuit breakers?

- A. oil
- B. air
- C. water
- D. none of these

59. Modern trend in rail electrification in India is to use which of the following supply system

- A. 25 kV, 50 Hz
- B. 15 kV, 50 Hz
- C. 6 kV, 50 Hz
- D. 6 kV, dc

60. Insulation of the modern EHV lines is designed based on

- A. lighting voltage
- B. switching voltage
- C. corona
- D. RI

61. In a nuclear power station, moderator is used to

- A. absorb neutrons
- B. reduce the speed of neutrons
- C. accelerate the speed of neutrons
- D. stop the chain reaction

62. Earthing of power transmission line is necessary to provide protection against

- A. overload
- B. voltage fluctuation
- C. electric shock
- D. temperature rise of conductors

63. Transformer cores are built up from laminations rather than from solid metal so that

- A. oil penetrates the core more easily
- B. eddy current loss is reduced
- C. less insulation is required for the windings
- D. turn ratio is higher than voltage ratio

64. An ideal transformer is one which

- A. has a common core for its primary and secondary windings
- B. has no losses and magnetic leakage
- C. has core of stainless steel and windings of pure copper metal
- D. has interleaved primary and secondary windings

65. The primary reason why open-circuit test is performed on the lowest-voltage winding of the transformer is that it

- A. draws sufficiently large no-load current for convenient reading
- B. requires least voltage to perform the test
- C. needs minimum power input
- D. has become a universal custom

66. During short-circuit test, the iron loss of a transformer is negligible because

- A. the entire input is just sufficient to meet Cu losses only
- B. voltage applied across the h.v. side is a small fraction of the rated voltage and so is the flux.
- C. iron core becomes fully saturated
- D. supply frequency is held constant

67. The ordinary efficiency of a given transformer is maximum when

- A. it runs at half full-load
- B. it runs at full-load
- C. its Cu loss equals iron loss
- D. it runs overload

68. Which of the following parts of a transformer is likely to suffer maximum damage due to excessive temperature rise?

- A. copper windings
- B. core laminations
- C. dielectric strength of oil
- D. winding insulation

69. Transformer oil used in transformer provides

- A. insulation and cooling
- B. cooling and lubrication
- C. lubrication and insulation
- D. insulation, cooling and lubrication

70. When the secondary of a 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 excess current drawn due to the secondary current

71. The secondary of a PT is generally designed for

- A. 220 V
- B. 110 V
- C. 150V
- D. 11 V

72. Buchholz's relay gives warning and protection against

- A. electrical fault inside the transformer itself
- B. electrical fault outside the transformer in outgoing feeder
- C. for both outside and inside faults
- D. none of the above

73. Which of the following does not change in an ordinary transformer?

- A. Frequency B. Voltage C. Current D. Any of the above

74. Which of the following is a closed loop system

- A. electric switch
B. car starter
C. dc generator
D. auto-pilot for an aircraft

75. In a closed loop control system

- A. control action depends on the output and also on the input command
B. output signal is feedback to be compared with the reference signal
C. the accuracy is better than in open loop system
D. all of these

76. High ac voltages are usually measured with

- A. electrostatic voltmeters
B. voltmeter and current transformer
C. potential transformer and voltmeter
D. voltmeter and multiplier

77. Which of the following instrument will be used to measure alternating current only?

- A. moving-iron voltmeter
B. permanent-magnet type ammeter
C. induction-type ammeter
D. moving-iron (attraction-type) ammeter.

78. Essential requirement of an electrical measuring instrument is that

- A. its resistance should be low
B. it is always connected in series in the circuit
C. its introduction into the circuit under measurement does not alter the circuit conditions and the power consumed by it for its operation is small
D. its resistance should be infinite

79. The phenomenon of creeping occurs in

- A. ammeters
B. voltmeters
C. watt meters
D. energy meters

80. The energy required to liberate an electron from an atom is called

- A. kinetic energy
B. potential energy
C. excitation energy
D. ionization energy

81. Magnetostriction is the phenomenon of

- A. producing electricity in ferromagnetic materials
B. producing magnetism in conductors
C. changes in physical dimensions of ferromagnetic materials during magnetization
D. changes in permeability of ferromagnetic material during magnetization

82. The peak inverse voltage (PIV) is applied across a diode when it is

- A. ON
B. on a heat sink
C. reverse-biased
D. forward-biased

83. When biased correctly, a Zener diode

- A. acts as a fixed resistance
- B. has a constant voltage across it
- C. has a constant current passing through it
- D. never overheats

84. A 'data bus' refers to

- A. latest commuter bus introduced by Delhi Transport Undertaking
- B. data lines of a system bus in a microcomputer
- C. a device for collecting and storing different data in a microprocessor
- D. none of the above

85. The digital systems usually operate on system.

- A. binary
- B. decimal
- C. octal
- D. hexadecimal

86. A NOR gate is ON only when all its inputs are

- A. ON
- B. positive
- C. high
- D. OFF

87. EAROM memory is

- A. magnetically alterable
- B. electrically alterable
- C. either of (A) or (B) above
- D. none of the above

88. In a communication system, noise is most likely to effect the signal in the

- A. channel
- B. transmitter
- C. information source
- D. any of the above

89. Domestic refrigerator working on vapour compression cycle uses the following type of expansion device

- A. Electrically operated throttling valve
- B. Manually operated valve
- C. Thermostatic valve
- D. Capillary tube

90. The word "Computer" usually refers to the Central Processing Unit plus:

- A. Input Devices
- B. External Memory
- C. Internal Memory
- D. Output Device

91. Ajit has a certain average for 9 innings. In the tenth innings, he scores 100 runs thereby increasing his average by 8 runs. His new average is:

- A. 20
- B. 21
- C. 28
- D. 32

92. 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

93. Three numbers are in ratio 1 : 2 : 3 and HCF is 12. The numbers are:

- A. 12, 24, 36
- B. 11, 22, 33
- C. 12, 24, 32
- D. 5, 10, 15

94. A sells an article to B at a profit of 10% B sells the article back to A at a loss of 10%. In this transaction:

- A. A neither losses nor gains
- B. A makes a profit of 11%
- C. A makes a profit of 20%
- D. B loses 20%

95. Subhash can copy 50 pages in 10 hours; Subhash and Prakash together can copy 300 pages in 40 hours. In how much time can Prakash copy 30 pages?

- A. 13 hour
- B. 12 hour
- C. 11 hour
- D. 9 hour

96. To gain 10% on selling sample of milk at the cost price of pure milk, the quantity of water to be mixed with 50 kg. of pure milk is:

- A. 2.5 kg
- B. 5 kg
- C. 7.5 kg
- D. 10 kg

97. Three partners A , B , C start a business . B's Capital is four times C's capital and twice A's capital is equal to thrice B's capital . If the total profit is Rs 16500 at the end of a year ,Find out B's share in it.

- A. Rs. 4000
- B. Rs. 5000
- C. Rs. 6000
- D. Rs. 7000

98. The angle of elevation of a ladder leaning against a wall is 60° 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

99. The sum of ages of 5 children born at the intervals of 3 years each is 50 years. What is the age of the youngest child?

- A. 4 years
- B. 8 years
- C. 10 years
- D. None of these

100. 66 cubic centimetres of silver is drawn into a wire 1 mm in diameter. The length of the wire in metres will be:

- A. 84 meters
- B. 90 meters
- C. 168 meters
- D. 336 meters

101. The price of 10 chairs is equal to that of 4 tables. The price of 15 chairs and 2 tables together is Rs. 4000. The total price of 12 chairs and 3 tables is:

- A. Rs. 3500
- B. Rs. 3750
- C. Rs. 3840
- D. Rs. 3900

102. $(17)^{3.5} \times (17)^7 = 17^8$

- A. 2.29
- B. 2.75
- C. 4.25
- D. 4.5

103. 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%

104. 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

105. The population of a town increases every year by 4%. If its present population is 50,000, then after 2 years it will be

- A. 53,900
- B. 54,000
- C. 54,080
- D. 54,900

106. 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

107. A train 125 m long passes a man, running at 5 km/hr in the same direction in which the train is going, in 10 seconds. The speed of the train is:

- A. 45 km/hr
- B. 50 km/hr
- C. 54 km/hr
- D. 55 km/hr

108. 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

109. Three times the first of three consecutive odd integers is 3 more than twice the third. The third integer is:

- A. 9
- B. 11
- C. 13
- D. 15

110. The ratio between the perimeter and the breadth of a rectangle is 5 : 1. If the area of the rectangle is 216 sq. cm, what is the length of the rectangle?

- A. 16 cm
- B. 18 cm
- C. 24 cm
- D. Data inadequate

Directions: In each of the following Questions(111 to 113), there is a certain relationship between two given words on one side of :: and one word is given on another side of :: while another word is to be found from the given alternatives, having the same relation with this word as the words of the given pair bear : choose the correct alternatives.

111. Aeroplane : Cockpit :: Train : ?

- (a) Wagon
- (b) Coach
- (c) Compartment
- (d) Engine

112. Amnesia : Memory :: Paralysis : ?

- (a) Movement
- (b) Limbs
- (c) Handicapped
- (d) Legs

113. Radio : Listener :: Film : ?

- (a) Producer
- (b) Actor
- (c) Viewer
- (d) Director

Directions (Q. No. 114-1116): Choose the word which is look different from the other words in the group

114. (a) House
(b) Cottage
(c) School
(d) Palace

115. (a) Hostel
(b) Hotel
(c) Inn
(d) Club

116. (a) Kennel
(b) House
(c) Stable
(d) Aviary

117. 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

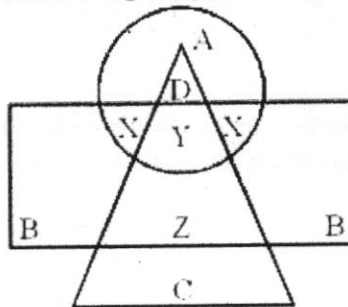
118. A man said to a lady, "Your mother's husband's sister is my aunt." How is the lady related to the man?

- (a) Daughter
- (b) Grand daughter
- (c) Mother
- (d) Sister

119. 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

Directions (Q. No. 120-124) : In the following diagram, the circle represents College Professors, the triangle stands for Surgical Specialists, and Medical Specialists are represented by the rectangle.



120. College Professors who are also Surgical Specialists are represented by

- (1) A
- (b) B
- (c) C
- (d) D

121. Surgical Specialists who are also Medical Specialists but not Professors are represented by

- (a) B
- (b) X
- (c) X
- (d) Z

122. C represents

- (a) Medical Specialists
- (b) College Professors
- (c) Surgical Specialists
- (d) Medical and Surgical Specialists

123. B represents

- (a) Professors who are neither Medical nor Surgical Specialists
- (b) Professors who are not Surgical Specialists
- (c) Medical Specialists who are neither Professors nor Surgical Specialists
- (d) Professors who are not Medical Specialists

124. College Professors who are also Medical Specialists are represented by

- (a) A
- (b) X
- (c) Y
- (d) Z

125. If + means $\div$, $\div$ means $-$, $-$ means $\times$, $\times$ means $+$, then $12 + 6 \div 3 - 2 \times 8 = ?$

- (a) -2
- (b) 2
- (c) 4
- (d) 8

126. A number is greater than 3 but less than 8. Also, it is greater than 6 but less than 10. The number is?

- (a) 5
- (b) 6
- (c) 7
- (d) 8

127. If ' $-$ ' stands for 'division', ' $+$ ' for 'multiplication', ' $\div$ ' for 'subtraction' and ' $\times$ ' for 'addition', then which one of the following equations is correct?

- (a) $4 \times 5 + 9 - 3 \div 4 = 15$
- (b) $4 \times 5 \times 9 + 3 \div 4 = 11$
- (c) $4 - 5 \div 9 \times 3 - 4 = 17$
- (d) $4 \div 5 + 9 - 3 + 4 = 18$

Directions (Q. No. 128-130): Study the given information carefully and answer the questions that follow :

- (i) A, B, C, D, E, F and G are sitting on a wall and all of them are facing east.
- (ii) C is on the immediate right of D.
- (iii) B is at an extreme end and has E as his neighbour.
- (iv) G is between E and F.
- (v) D is sitting third from the south end.

128. Who is sitting to the right of E?

- (a) A
- (b) C
- (c) D
- (d) F

129. Name the person who should change place with C such that he gets the third place from the north end.

- (a) E
- (b) F
- (c) G
- (d) D

130. Immediately between which of the following pairs of people is D sitting?

- (a) AC
- (b) AF
- (c) CE
- (d) CF

131. The three deities are taken from the Jagannath Temple to which temple?

- A. Gundicha temple
- B. Lord Ganesha Temple
- C. Goddess Laxmi Temple
- D. None of the above

132 The central banking functions in India are performed by the

- (A) Central Bank of India
- (B) Reserve Bank of India
- (C) State Bank of India
- (D) Punjab National Bank

133. Novak Djokovic is a famous player associated with the game of

- A. Hockey
- B. Football
- C. Chess
- D. Lawn Tennis

134. Ramcharitamanas was written by?

- (A) Tulsidas
- (B) Kalidas
- (C) Kabir
- (D) Ravidas

135. _____ was the first Mughal emperor in India.

- (a) Shah Jahan
- (b) Humayun
- (c) Babur
- (d) Akbar

136. Which of the following is the longest river in India?

- (a) Kaveri
- (b) Godavari
- (c) Brahmaputra
- (d) Ganga

137. The Victoria Memorial, conceived by Lord Curzon, represents the architectural climax of _____ city.

- (a) Jaipur
- (b) Kolkata
- (c) Mumbai
- (d) Delhi

138. Who among the following holds the record for longest serving Chief Minister of Odisha?

- A. Janaki Ballabh Patnaik
- B. Naveen Patnaik
- C. Biju Patnaik
- D. Harekrushna Mahatab

139. Which of the following is the state animal of Odisha?

- A. Sambar deer
- B. Indian giant squirrel
- C. Olive ridley turtle
- D. Barasingha

140. Which poet is known as the Kabi Samrata?

- A. Radhanath Ray
- B. Baladev Ratha
- C. Upendra Bhanja
- D. Gopabandhu Dash

141. Total Number of Lok Sabha seats in Odisha?

- A. 52
- B. 51
- C. 21
- D. None of These

142. The famous war of Kalinga was fought in the year

- A. 270 BC
- B. 261 BC
- C. 265 BC
- D. 296 BC

143. When was the first train steamed off in India?

- A. 1848
- B. 1853
- C. 1875
- D. 1880

144. Diesel Locomotive Works is situated at

- (A) Perambur
- (B) Varanasi
- (C) Kapurthala
- (D) Bangalore

145. On which lake is the Golden Temple located?

- (a) Amrit Sarovar Lake
- (b) Golden Lake
- (c) Harike Lake
- (d) Sukhna Lake

146. Which of the following type of rays does NOT penetrate Earth's atmosphere?

- (a) Visible Light
- (b) X-rays
- (c) Ultraviolet Rays
- (d) Radio Waves

147. Which planet is known as red planet?

- (a) Mercury
- (b) Pluto
- (c) Mars
- (d) Venus

148. Rajya Sabha member has tenure of _____ years.

- (a) 8
- (b) 6
- (c) 4
- (d) 5

149. Who was the founder of the Theosophical Society?

- (a) Justice Ranade
- (b) Madam Blavatsky
- (c) Annie Besant
- (d) Bal Gangadhar Tilak

150. Which organ of human body secretes Insulin?

- (a) Pancreas
- (b) Kidney
- (c) Gall bladder
- (d) Liver