

JEE Electrical

(Each question is having four multiple choice answers out of which only one is correct. For each correct answer one mark will be awarded.)

- Q.1 The average of 12 results is 15, and the average of the first two is 14. What is the average of the rest.
c) $15 \frac{1}{5}$
- Q.2 Nine men went to a hotel. Eight of them spent Rs. 10 each on their meals, ninth spent Rs. 4 more than the average of all of them, ninth man spent
d) Rs. 14.50
- Q.3 If the simple interest on a sum of money at 5% p.a for 3 years is Rs. 1200, the compound interest on the same sum for the same period at the same rate is
b) Rs. 1261
- Q.4 A tree increases annually by $\frac{1}{8}$ th of its height. By how much will it increase after 2 years, if it stands today 64 cm height?
d) 81 cm
- Q.5 A can do a certain job in 12 days. B is 60% more efficient than A. The number of days, it takes B to do the same piece of work is
c) $7 \frac{1}{2}$ days
- Q.6 An electric pump can fill a tank in 3 hours. Because of a leak in the tank, it took $3 \frac{1}{2}$ hours to fill the tank. The leak can drain out all the water of the tank in
c) 21 hrs.
- Q.7 What percent of 72 is 6?
c) $25\frac{1}{3}\%$
- Q.8 63% of $\frac{25}{7}$ is
a) 2.25
- Q.9 If by selling an article for Rs. 100 a man gains Rs. 15, then his gain percent is
c) $300\frac{1}{7}\%$
- Q.10 If the S.P of an article for is $\frac{4}{3}$ times its C.P, the profit percent is
a) $100\frac{1}{3}\%$
- Q.11 In what ratio must the 1:4 mixture of milk and water be mixed with a 1:1 mixture to obtain a 2:3 mixture?
c) 2:1
- Q.12 A sum of Rs. 18.45 is made up of 90 coins which are either 10 paise coins or 25 paise coins. Find the number of each type of coins.
b) 3:7
- Q.13 For which sample will the proportionality constants of both the equations be equal.
d) None of these
- Q.14 Two men X and Y start from a place P, walking at 3 kms/hr and 4 kms/hr, what will be the distance between them after 5 hours if they are walking in the same direction?
a) 35 kms
- Q.15 If distance covered in 2 hours 15 min at 4 kmph then time taken to cover it at 18 kmph is
c) 30 min.

- Q.16 A man row up the stream 15 km and down the stream 35 km taking 5 hours each time. The velocity of the current is
d) 2 km/hr
- Q.17 A train 100 meters long takes half a minute in crossing a tunnel 400 m. long. The speed of the train is
c) 60 km/hr
- Q.18 A train running at 40 km/hr passes a person riding parallel to the railway line in the same direction at 25 km/hr in 48 seconds. Then length of the train is
a) 200m
- Q.19 The length and breadth of a rectangle is 136 cm and 102 cm. respectively, its area is
c) 1.39 m^2
- Q.20 If the length of a square is doubled its area will increase
b) three times
- Q.21 Find the missing letters.
A, B, D, G,
- Q.22 A, D, H, M, S,
- Q.23 Find the missing numbers.
18, 21, 24, 27,
b) 30
- Q.24 3, 9, 27, 81,
- Q.25 1, 2, 6, 24, 120,
c) 720
- Q.26 Choose same relationship from given four choices as given in original pair
Square: Cube
a) Triangle: Prism
- Q.27 Teeth : chew
d) Mind : Think
- Q.28 Train : Track
c) Bullet : Barrel
- Q.29 Taste: Tongue :: Light : ?
c) Eye
- Q.30 Coconut : Shell :: Letter : ?
d) Envelop
- Q.31 Choose appropriate words:
Black is to coal as Hard is to
a) Rock
- Q.32 Eye is to Tear as Mouth is to
d) Saliva
- Q.33 Choose appropriate number for fourth place.
36:18 :: 72: ?
d) 14
- Q.34 2 : 16 :: 4 : ?
c) 256
- Q.35 Find the missing letter.
ABC:ZYX :: DEF: ?
c) WVU

- Q.36 ABA: ECE :: ____ : ____
d) CDC: GEG
- Q.37 Find out the odd one from given four words.
a) Book
- Q.38 Find out the odd one from given four words.
b) Heart
- Q.39 If DIAMOND is coded as VQYMKLV then WEALTH is coded as
a) CUYNFR
- Q.40 If 'light' is called 'morning', 'morning' is called 'dark', 'dark' is called 'night', 'night' is called 'sunshine' and 'sunshine' is called 'dusk', when do we sleep?
d) Sunshine
- Q.41 On whose birthday is Teacher's day celebrated?
a) S. Radhakrishnan
- Q.42 After the break up at Soviet Union, which is the largest country in the world in terms of area?
c) Russia
- Q.43 International Women's day is observed on
d) 08 March
- Q.44 Third World refers to
a) Developing Countries
- Q.45 Where is the headquarters of Oil and Natural Gas Commission?
a) Mumbai
- Q.46 The famous player Pele is associated with which of the following games?
b) Football
- Q.47 Which of the following place is called the Mecca of Indian Football?
c) Kolkata
- Q.48 If you scored a cannon, which game would you be playing?
c) Billiards
- Q.49 Limba Ram is known for his outstanding performance in which of the following?
d) Archery
- Q.50 The All India Muslim League was founded under the leadership of
c) Agha Khan and Mohsinul-Mulk
- Q.51 Who gave the call "Do or Die"?
b) Mahatma Gandhi
- Q.52 The Indian National Army was founded by
a) Subhas Chandra Bose
- Q.53 Who gave the slogan Inquilab Zindabad?
b) Iqbal
- Q.54 The original aim of the East India Company was
b) Trade
- Q.55 Which state is known for its filigree work?
a) Orissa

- Q.56 Which is the largest tea producing country in the world?
d)India
- Q.57 The official language as per the constitution is
b)Hindi
- Q.58 It is proposed to set up an IIT in Jaipur with the collaboration of which country?
b) France
- Q.59 Who started the "Yellow Revolution in 1980's in India?
a) Sam Pitroda
- Q.60 Which of the following states has imposed a ban on Polythene with a fine up to Rs. 25,000/-
a)Himachal Pradesh
- Q.61 A wave undergoes reflection from a rigid boundary. One of its Characteristic Parameters that changes is
b)Phase
- Q.62 How many calories of heat will be required to convert 1 g of ice at $0^{\circ}C$ into steam at $100^{\circ}C$?
a) 720 cal
- Q.63 An ammeter is connected in series with an unknown resistance and a voltmeter is connected across the terminals of the resistance. If the ammeter reads 1.2A and the voltmeter reads 18 V, the value of resistance is
c) 15
- Q.64 The height of a building is 78.4m. If a stone drops from the edge of the roof of the building, how much time does it take to reach the ground.
b)4 seconds
- Q.65 When the moon is near the horizon, it appears bigger because of
a) atmospheric refraction
- Q.66 If a clock based on oscillating pendulum is taken from earth to moon, it will
d) stop working
- Q.67 What is the frequency of a wave whose time period is 0.05 second?
c)20 Hz
- Q.68 Alternating current instead of direct current is used in long distance electric transmission because
c)energy losses are minimum
- Q.69 Which one of the following pairs of physical quantities has the same dimensions?
c) momentum and impulse
- Q.70 Repeaters used in telephone links are
c)Amplifiers
- Q.71 Which one of the following elements can displace hydrogen gas from dilute acids?
a)Aluminium
- Q.72 Which one of the following pigments is used for making a yellow paint?
d)Chromic oxide
- Q.73 Which one of the following statements is not correct?
b)The solubility of carbon dioxide decreases with the increase in pressure
- Q.74 The purest form of iron is
d)wrought iron
- Q.75 An atom has 7 electrons in its M-shell and contains 18 neutrons in its nucleus. What is its mass number?
c)35

- Q.76 Which one among the following is the most unreactive gas?
a)Hydrogen
- Q.77 In chemical terms, what are alums used for purifying water for drinking purposes?
c)Double Sulphates
- Q.78 Sand stone is a
d)sedimentary rock
- Q.79 Which one of the following noble gases is not found in the atmosphere?
c)Randon
- Q.80 Which is the rarest naturally occurring element on the earth?
d)Astatine
- Q.81 The rice grain is
a) A seed
- Q.82 Photosynthesis generally takes place in which portions of the plant?
a) leaf and other chloroplast bearing parts
- Q.83 The number of chromosomes in the human body is
c)46
- Q.84 Which one is decomposer?
b) Rhizopus
- Q.85 Living beings are made up of cells. This was first stated by
a)Lamarck
- Q.86 Vitamin-D deficiencies causes
d) None of these
- Q.87 The chemical name of Vitamin-C is
c)ascorbic acid
- Q.88 Dialysis is meant for
a) Kidney
- Q.89 The maximum amount of which food substance is lost during processing?
a)Vitamins
- Q.90 The deficiency of Vitamin-A causes
c)night blindness
- Q.91 An active element in a circuit is
a)Current source
- Q.92 Kirchhoff's laws are valid for
d) both linear and non-linear circuits
- Q.93 In Fleming's left hand rule thumb always represents direction of
d) mechanical force
- Q.94 mmf of magnetic circuit is analogous to
b)emf
- Q.95 An air gap is usually inserted in magnetic circuits to
a)prevent saturation
- Q.96 Permeability is reciprocal of
a) reluctance
- Q.97 When an electric current is passed through a bucket full of water, lot of bubbling is there. The electric current is
b)dc.
- Q.98 The armature of dc motor is laminated
b) to reduce eddy current loss
- Q.99 The back emf of a dc motor
c) helps in energy conversion

- Q.100 If the load on a dc shunt motor is increased, its speed decreases primarily due to
b) decrease in back emf
- Q.101 Speed of a dc motor may be varied by varying
d) any of these
- Q.102 All rotating electric machines are basically
c) electro-mechanical convertors
- Q.103 The function of commutator in a dc machine is
c) to change ac voltage into dc voltage
- Q.104 Brushes for commutator are made of
c) carbon
- Q.105 An ordinary transformer works on
a) a.c
- Q.106 Which type of core is used for a high frequency transformer
b) air core
- Q.107 In a transformer, conservator consists of
a) an air tight metal drum fixed at the top of the tank
- Q.108 In a transformer, the resistance between its primary and secondary should be
b) infinite
- Q.109 In a transformer, the oil must be free from
d) both (b) and (c)
- Q.110 Transformer ratings are usually expressed in terms of
c) kVA
- Q.111 In a three-phase transformer, the phase difference between the primary voltage and the induced secondary winding voltage is
c) 180°
- Q.112 Starters are used in induction motor because
d) its starting current is five times or more than its rated current
- Q.113 If in a 3-phase induction motor, two phases open accidentally, the motor will
c) continue to run depending on load
- Q.114 Squirrel cage induction motor has
b) very small starting torque
- Q.115 An induction motor is running at its rated torque and rated applied voltage of 440 volts. The effect of reducing the applied voltage to say 350 volts is
d) motor heats up with passage of time
- Q.116 Improvement of the power factor in an induction motor results in
d) increased torque and decreased current due to increased impedance.
- Q.117 The rotor output of an induction motor is 15 kW and the slip is 4%. Then the rotor copper loss is
a) 600 watts
- Q.118 Number of different speeds that can be obtained from two induction motors in cascade is
c) 4
- Q.119 The emf generated in alternator depends on
d) all of these
- Q.120 The rotor of a salient pole alternator has 12 poles. The number of cycles of emf per revolution would be
b) 6
- Q.121 The ratio of armature leakage reactance to synchronous reactance of large size modern alternator is about
b) 0.2

- Q.122 To ensure effective cooling, cylindrical rotor alternators use
c) both radial and axial ducts
- Q.123 Use of damped winding in alternators results in
d) all of these
- Q.124 In an alternator, in order to reduce the harmonics in the generated emf
d)all of these
- Q.125 The following part plays important role in over speed protection of an alternator
d) governor
- Q.126 Coolant used in fast breeder reactor is
a)Sodium
- Q.127 Which of the following plant has maximum efficiency?
d) Nuclear power station
- Q.128 Frequency of the generated voltage is maintained constant by adjusting
a) speed of prime mover
- Q.129 Connected load is sum of
c) continuous ratings of load consuming apparatus connected
- Q.130 Load factor is defined as
b) average demand / maximum demand
- Q.131 Maximum demand for a bulk consumer is measured in
b)KVA
- Q.132 Different methods of prices charging is called
a) tariff
- Q.133 Insulators used on EHT transmission lines are made of
b)Porcelain
- Q.134 Corona occurs between two transmission conductors when they
d) both (a) and (b)
- Q.135 Critical voltage limit of a transmission line is increased by
a)increasing the radius of the conductors
- Q.136 Transmission line constants are
d)all of these
- Q.137 Capacitance of a transmission line
a)increases
- Q.138 Skin effect in transmission line is due to
d) both (a) and (b)
- Q.139 In a power system, the rate of rise of restriking voltage depends upon
c) both (a) and (b)
- Q.140 Bulk oil circuit breaker is suitable for voltages up to
d) 36 kV
- Q.141 Lightning arrestor should be located
d) near the transformer
- Q.142 The voltage appearing across the contacts after the opening of the circuit breaker is called
b)recovery voltage
- Q.143 Buchholz relays are used for transformers of ratings above
c)500 kV
- Q.144 Directional relays respond to the
c) flow of power
- Q.145 Effect of feedback on the plant is to
c)both (a) and (b)

- Q.146 Transfer function of a system is defined as the ratio of output to input in
c) Laplace transform
- Q.147 Automatic control system in which output is a variable is called
d) Process control system
- Q.148 Main difference between servomotor and standard motor is that
b) servomotor has low inertia and low starting torque
- Q.149 If gain is zero, then
b) roots coincide with poles
- Q.150 For relative stability of the system which of the following is sufficient?
c) Both (a) and (b)
