SSC JE 2016

Electrical - 4th March 2016

QID : 601 - A current is said to be alternating when it changes in _____.

Options:

1) Magnitude only

2) Direction only

3) Both magnitude and direction

4) None of these

Correct Answer: Both magnitude and direction

QID : 602 - The rms value of a sine wave is 100 A. Its peak value is _____.

Options:

1) 70.7 A

2) 141.4 A

3) 150 A

4) 282.8 A

Correct Answer: 141.4 A

QID : 603 - A 50 Hz ac voltage is measured with a moving iron voltmeter and a rectifier type ac voltmeter connected in parallel. If the meter readings are V1 and V2respectively and the meters are free from calibration errors, then the form factor of the ac voltage may be estimated as _____.

Options:

1) V1/V

2) 1. 1 V1/V2

3) 2 V1/V

4) π V1/2V

Correct Answer: 1.11 V1/V2

QID : 604 - The rms value of the resultant current in a wire which carries a dc current of 10 A and a sinusoidal alternating current of peak value 20 A is _____.

Options:

1) 14.1 A
2) 17.3 A
3) 22.4 A
4) 30 A

Correct Answer: 17.3 A

QID : 605 - Two sinusoidal emfs are given as _____. e1=A sin(ωt+π/4) and e2=B sin(ωt-π/6). The phase difference between the two quantities, in degrees, is _____.

Options:

1) 75
2) 105
3) 60
4) 15

Correct Answer: 75

QID : 606 - Which of the following statements pertains to resistor only?

Options:

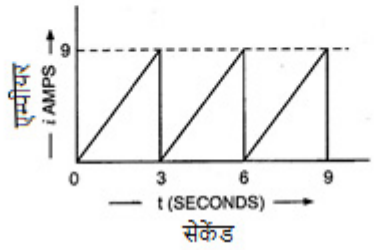
1) they oppose sudden changes in voltages
2) they can act as energy storage devices
3) they can dissipate desirable amount of power
4) None of these

Correct Answer: they can dissipate desirable amount of power

QID : 607 -

The current waveform in a pure resistor of 10 Ω is shown in the given figure. Power dissipated in the resistor is:-

10 Ω के शुद्ध प्रतिरोध का धारा तरंगरूप आकृतरी में दर्शाया गया है । प्रतिरोध में निष्पादित शक्ति होगी :



Options:

1) 7.29 W

2) 52.4 W

3) 135 W

4) 270 W

Correct Answer: 270 W

QID : 608 - Purely inductive circuit takes power from the ac mains when _____.

Options:

1) both applied voltage and current increase

2) both applied voltage and current decrease

3) applied voltage decreases but current increases

4) applied voltage increases but current decreases

Correct Answer: applied voltage decreases but current increases

QID : 609 - A pure capacitance connected across 50 Hz, 230 V supply consumes 0.04 W. This consumption is attributed to _____.

Options:

1) ohmic loss due to ohmic resistance of plates

2) loss of energy in dielectric

3) capacitive reactance in ohms

4) Both ohmic loss due to ohmic resistance of plates and loss of energy in dielectric

Correct Answer: Both ohmic loss due to ohmic resistance of plates and loss of energy in dielectric

QID : 610 - A voltage of 50sin1000t V is applied across a parallel plate capacitor with plate area of 5 cm2 and plate separation gap of 5 mm. If the dielectric material in the capacitor has ?=2?0, then the capacitor current in (Amperes) will be _____.

Options:

1) [104/?0]cos103t

2) ?0104cos103t

3) [104/?0]sin103t

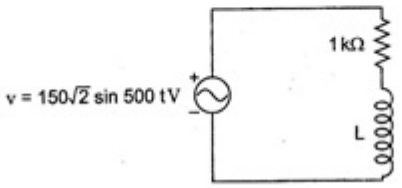
4) ?0104sin103t

Correct Answer: ?0104cos103t

QID : 611 -

For the AC circuit as shown below, if the rms voltage across the resistor is 120 V, what is the value of the inductor?

नीचे दिये अनुसार एसी परिपथ के लिए, यदि प्रतिरोध के साथ आरएमएस वोल्टेज 120V हो, तो प्रेरित्र का मान क्या होगा?



Options:

1) 0.5 H

2) 0.6 H

3) 1 H

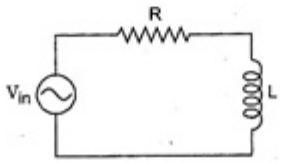
4) 1.5 H

Correct Answer: 1.5 H

QID : 612 -

The R-L circuit of the figure is fed from a constant magnitude variable frequency sinusoidal voltage source v_in. At 100 Hz, the R and L element each has a voltage drop U_{rms} If the frequency of the source is changed to 50 Hz, then new voltage drop across R is:-

आकृति में R-L परिपथ को अचर परिमाण, चर आवृति ज्यावक्रिय वोल्टेज स्रोत v_in से आपूर्ति की जाती है । 100 हर्ट्ज पर, R और L दोनों में वोल्टेज ड्रॉप U_{rms} होता है। यदि स्रोत की आवृति 50 हर्ट्ज बदल जाए तो R के साथ वोल्टेज ड्रॉप _____ होगा:-



Options:

1)

$\sqrt{\frac{5}{8}}U_{rms}$

2)

$\sqrt{\frac{2}{3}}U_{rms}$

3)

$\sqrt{\frac{8}{5}}U_{rms}$

4)

$\sqrt{\frac{3}{2}}U_{rms}$

Correct Answer:

$\sqrt{\frac{8}{5}}U_{rms}$

QID : 613 - A certain R-L series combination is connected across a 50 Hz single-phase ac supply. If the instantaneous power drawn was found to be negative for 2 milliseconds in one cycle, the power factor angle of the circuit must be _____.

Options:

1) 9°

2) 18°

3) 36°

4) 45°

Correct Answer: 36°

QID : 614 - The voltage phaser of a circuit is 10∠15°V and the current phasor is 2∠- 45°A. The active and reactive powers in the circuit are _____.

Options:

1) 10 W and 17.32 VAR
2) 5 W and 8.66 VAR
3) 20 W and 60 VAR
4) 20√2 W and 10√2 VAR

Correct Answer: 10 W and 17.32 VAR

QID : 615 - In an RLC circuit, supplied from an ac source, the reactive power is proportional to the

Options:

1) average energy stored in the electric field
2) average energy stored in the magnetic field
3) sum of the average energy stored in the electric field and that stored in the magnetic field
4) difference between the average energy stored in the electric field and that stored in the magnetic field

Correct Answer: difference between the average energy stored in the electric field and that stored in the magnetic field

QID : 616 - In gases the flow of current is due to _____.

Options:

1) Electrons only
2) Positive and negative ions
3) Electrons, positive ions
4) Electrons, positive ions and negative ions

Correct Answer: Electrons, positive ions and negative ions

QID : 617 - Ohm's law is applicable to _____.

Options:

1) semiconductors

2) vacuum tubes

3) electrolytes

4) None of these

Correct Answer: None of these

QID : 618 - Pure metals generally have _____.

Options:

1) high conductivity and low temperature coefficient

2) high conductivity and large temperature coefficient

3) low conductivity and zero temperature coefficient

4) low conductivity and high temperature coefficient

Correct Answer: high conductivity and large temperature coefficient

QID : 619 - The insulation resistance of a cable of length 10 km is 1 MΩ. For a length of 100 km of same cable, the insulation resistance will be _____.

Options:

1) 1 MΩ

2) 10 MΩ

3) 0.1 MΩ

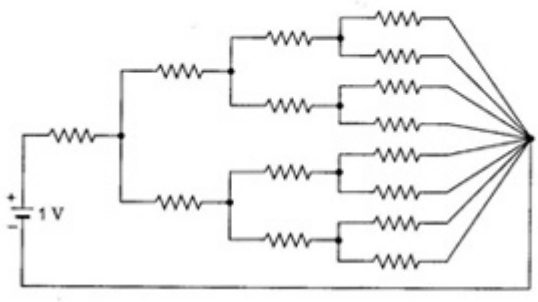
4) 0.01 MΩ

Correct Answer: 0.1 MΩ

QID : 620 -

All the resistances in figure shown below are 1 Ω each. The value of current 'I' is:-

दर्शाई गई आकृति में सभी प्रतिरोध 1 Ω के हैं । धारा 'I' का मान _____होगा:-



Options:

1) 1/15 A

2) 2/15 A

3) 4/15 A

4) 8/15 A

Correct Answer: 8/15 A

QID : 621 - Which of the following does not use heating effect of electric current?

Options:

1) Electric furnace

2) Geyser

3) Electric iron

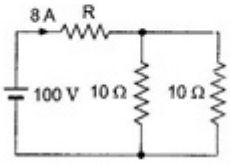
4) Vacuum cleaner

Correct Answer: Vacuum cleaner

QID : 622 -

In the figure given below, the value of:-

नीचे दी आकृति में, R का मान ____ होगा :-



Options:

1) 2.5 Ω

2) 5 Ω

3) 7.5 Ω

4) 10 Ω

Correct Answer: 7.5 Ω

QID : 623 - Four 100 W bulbs are connected in parallel across 200 V supply line. If one bulb gets fused _____.

Options:

1) no bulb will light

2) all the four bulbs will light

3) rest of the three bulbs will light

4) None of these

Correct Answer: rest of the three bulbs will light

QID : 624 - A 100 watt light bulb burns on an average of 10 hours a day for one week. The weekly consumption of energy will be _____.

Options:

1) 7 units

2) 70 units

3) 0.7 units

4) 0.07 units

Correct Answer: 7 units

QID : 625 - The elements which are not capable of delivering energy by its own are known as _____.

Options:

1) unilateral elements

2) nonlinear elements

3) passive elements

4) active elements

Correct Answer: passive elements

QID : 626 - A network has 4 nodes and 3 independent loops. What is the number of branches in the network?

Options:

1) 5

2) 6

3) 7

4) 8

Correct Answer: 6

QID : 627 - A connected network of N > 2 nodes has at most one branch directly connecting any pair of nodes. The graph of the network _____.

N > 2 नोड्स के जुड़े नेटवर्क में किसी भी निस्पंद (नोड्स) के जोड़ो को सीधे मिलाने के लिए न्यूनतम एक शाखा होती है। नेटवर्क के ग्राफ में _____

Options:

1) must have at least N branches for one or more closed paths to exist

2) can have an unlimited number of branches

3) can only have at most N branches

4) can have a minimum number of branches not decided by N

Correct Answer: must have at least N branches for one or more closed paths to exist

QID : 628 -

The determinant of the matrix $\begin{bmatrix} 1 & 0 & 0 & 0 \\ 100 & 1 & 0 & 0 \\ 100 & 200 & 1 & 0 \\ 100 & 200 & 300 & 1 \end{bmatrix}$ is:-

आव्यूह $\begin{bmatrix} 1 & 0 & 0 & 0 \\ 100 & 1 & 0 & 0 \\ 100 & 200 & 1 & 0 \\ 100 & 200 & 300 & 1 \end{bmatrix}$ का सारणिक _____ होगा :-

Options:

1) 100

2) 200

3) 1

4) 300

Correct Answer: 1

QID : 629 - Ideal voltage source have _____.

Options:

1) zero internal resistance

2) infinite internal resistance

3) low value of current

4) large value of emf

Correct Answer: zero internal resistance

QID : 630 - A voltage source having an open circuit voltage of 100 V and internal resistance of 50 Ω is equivalent to a current source _____.

Options:

1) 2 A in parallel with 50 Ω

2) 2 A in series with 50 Ω

3) 0.5 A in parallel with 50 Ω

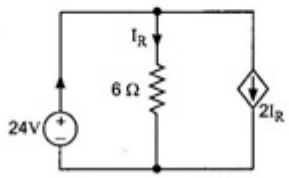
4) 2 A in parallel with 100 Ω

Correct Answer: 2 A in parallel with 50 Ω

QID : 631 -

Consider the circuit given below. What is the power delivered by the 24 V source?

नीचे दिये परिपथ पर विचार कीजिये। 24V स्रोत द्वारा दी जाने वाली शक्ति कितनी होगी?



Options:

1) 96 W

2) 114 W

3) 192 W

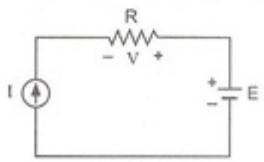
4) 288 W

Correct Answer: 288 W

QID : 632 -

For the circuit shown what is the voltage V if the source voltage is reduced by 50%?

नीचे दिये परिपथ के लिए स्रोत वोल्टेज को 50% कम करने पर वोल्टेज v कितनी होगी?



Options:

1) IR + E

2) E – IR

3) 2IR – (E/2)

4) (E/2) – IR

Correct Answer: (E/2) – IR

QID : 633 - A coil wound over an iron carries certain current and establishes flux in the ring. If the area of a x-section of the ring is doubled, the flux density in the core _____.

Options:

1) is double of the previous value
2) is half of the previous value
3) is same as the previous value
4) is not possible to predict

Correct Answer: is half of the previous value

QID : 634 - A cast steel electromagnet has an air gap length of 0.3 cm. Find the ampere-turns for the air gap to produce a flux density of 0.7 Wb/m2 in the air gap.

Options:

1) 2100 AT
2) 1671 AT
3) 1447 AT
4) 167 AT

Correct Answer: 1671 AT

QID : 635 - An air gap is usually inserted in magnetic circuits so as to _____.

Options:

1) prevent saturation
2) increase mmf
3) increase in flux
4) increase in inductance

Correct Answer: prevent saturation

QID : 636 - Which of the following statements is correct?

1) The magnetic flux inside the exciting coil is the same as on its outer surface
2) The magnetic flux inside an exciting coil is zero
3) The magnetic flux inside the exciting coil is greater than that on its outside surface
4) The magnetic flux inside the exciting coil is lower than that on the outside surface

Correct Answer: The magnetic flux inside the exciting coil is the same as on its outer surface

QID : 637 - Consider the following statements:
The force per unit length between two stationary parallel wires carrying (steady) currents _____.
A. is inversely proportional to the separation of wires.
B. is proportional to the magnitude of each current.
C. satisfies Newton's third law.

Out of these _____.

Options:
1) A and B are correct
2) B and C are correct
3) A and C are correct
4) A, B and C are correct

Correct Answer: A, B and C are correct

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QID : 638 - A magnetic circuit requires 800 AT to produce a certain quantity of flux in magnetic circuit. If its excitation coil has 100 turns and 5 ohm resistance, the voltage to be applied in exciting coil is _____.

Options:
1) 60 V

2) 40 V

3) 80 V

4) 8 V

Correct Answer: 40 V

QID : 639 - According to Faraday's law of electromagnetic induction an emf is induced in a conductor whenever it _____.

Options:
1) lies in a magnetic field
2) lies perpendicular to the magnetic field
3) cuts the magnetic flux
4) moves parallel to the direction of magnetic field

Correct Answer: cuts the magnetic flux

QID : 640 - "In all cases electromagnetic induction, an induced voltage will cause a current to flow in a closed circuit in such a direction that the magnetic field which is caused by that current will oppose the change that produces the current", is the original statement of _____.

Options:
1) Lenz's law
2) Faraday's law of magnetic induction
3) Fleming's law of induction
4) Ampere's law

Correct Answer: Lenz's law

QID : 641 - A 500 kVA transformer has constant loss of 500 W and copper losses at full load are 2000 W. Then at what load, is the efficiency maximum?

Options:
1) 250 KVA

2) 500 kVA

3) 1000 kVA

4) 125 kVA

Correct Answer: 250 KVA

QID : 642 - The all day efficiency of a transformer depends primarily on _____.

Options:
1) its copper losses
2) the amount of load
3) the duration of load
4) Both the amount and duration of load

Correct Answer: Both the amount and duration of load

QID : 643 - In a power transformer, the breather is provided in order to _____.

Options:
1) filter transformer oil
2) prevent ingress of moisture with air
3) the cooling oil
4) provide fresh air for increasing cooling effect

Correct Answer: prevent ingress of moisture with air

QID : 644 - The stator core of a synchronous machine is built up of _____ laminations.

Options:
1) stainless steel
2) silicon steel
3) cast iron
4) cast steel

Correct Answer: silicon steel

QID : 645 - The sag of a transmission line conductor in summer is _____.

Options:
1) less than that in winter
2) more than that in winter
3) same as in winter
4) None of these

Correct Answer: more than that in winter

QID : 646 - The slip rings employed in a 3-phase synchronous machine are insulated for _____.

Options:

1) output rated voltage

2) low voltage

3) very low voltage

4) very high voltage

Correct Answer: low voltage

QID : 647 - For a linear electromagnetic circuit, which of the following statement is true?

Options:

1) Field energy is equal to the co-energy

2) Field energy is greater than the co-energy

3) Field energy is lesser than the co-energy

4) Co-energy is zero

Correct Answer: Field energy is equal to the co-energy

QID : 648 - A short circuited rectangular coil falls under gravity with the coil remaining in a vertical plane and cutting perpendicular horizontal magnetic lines of force. It has _____ acceleration.

Options:

1) zero

2) increasing

3) decreasing

4) constant

Correct Answer: constant

QID : 649 - Reluctance torque in rotating machines is present, when _____.

Options:

1) air gap is not uniform

2) reluctance seen by stator mmf varies

3) reluctance seen by rotor mmf varies

4) reluctance seen by the working mmf varies

Correct Answer: reluctance seen by the working mmf varies

QID : 650 - In a dc motor the windage loss is proportional to _____.

Options:

1) supply voltage

2) square of the supply voltage

3) square of the flux density

4) square of the armature speed

Correct Answer: square of the armature speed

QID : 651 - Generally the no-load losses of an electrical machine is represented in its equivalent circuit by a _____.

Options:

1) parallel resistance with a low value

2) series resistance with a low value
3) parallel resistance with a high value
4) series resistance with a high value

Correct Answer: parallel resistance with a low value

QID : 652 - The zero-suppression in recorders implies _____.

Options:
1) recording signals with reference to a point other than the zero
2) removing the static component so that rest of the signal is displayed with more expansion
3) providing inertia-less components to improve transient response
4) designing the recorder for zero error

Correct Answer: removing the static component so that rest of the signal is displayed with more expansion

QID : 653 - Null type recorders are _____ recorders.

Options:
1) potentiometric
2) bridge
3) LVDT
4) Any of these

Correct Answer: Any of these

QID : 654 - In a magnetic tape blanks are provided at the _____.

Options:
1) start of the tape
2) middle of the tape
3) end of the tape
4) start and end of the tape

Correct Answer: start and end of the tape

QID : 655 - If the number of bellows elements is made double and the thickness of the bellows element is made half, the displacement of the element for the same applied pressure would be the _____.

Options:
1) 16 times
2) 4 times
3) same
4) one-fourth

Correct Answer: 16 times

QID : 656 - The meter measuring total flow in a liquid makes use of _____.

Options:
1) planimeter
2) variable area meter
3) square root extractor
4) none of these

Correct Answer: planimeter

QID : 657 - Self-generating type transducers are _____ transducers.

Options:
1) active
2) passive
3) secondary
4) inverse

Correct Answer: active

QID : 658 - A transducer that converts measurand into the form of pulse is called the _____ transducers.

Options:
1) active
2) analog
3) digital
4) pulse

Correct Answer: digital

QID : 659 - High value pot resistance leads to _____.

Options:
1) low sensitivity
2) high sensitivity
3) low non-linearity
4) less error

Correct Answer: high sensitivity

QID : 660 - In wire wound strain gauges, the change in resistance under strained condition is mainly on account of _____.

Options:
1) change in diameter of wire
2) change in the length of wire
3) change in both length and diameter of wire
4) change in resistivity

Correct Answer: change in both length and diameter of wire

QID : 661 - Which of the following is not an advantage of semiconductor gauges as compared to conventional strain gauges?

Options:
1) Excellent hysteresis characteristics
2) Least sensitive to temperature changes
3) High fatigue life
4) Smaller size

Correct Answer: Least sensitive to temperature changes

QID : 662 - In a vapour compression system, which of the following units is adversely affected by the presence of moisture?

Options:

1) evaporator
2) expansion valve
3) compressor
4) condenser

Correct Answer: expansion valve

QID : 663 - The range of horse power of diesel locomotive is _____.

Options:
1) 100 – 500

2) 1500 – 2500

3) 3000 – 4500

4) 4500 – 5000

Correct Answer: 1500 – 2500

QID : 664 - Electric traction in comparison to other traction systems has the advantages of _____.

Options:
1) higher acceleration and braking retardation
2) cleanest system and so ideally suitable for the underground and tube railways
3) better speed control
4) All of these

Correct Answer: All of these

QID : 665 - The method suitable for heating of conducting medium is _____.

Options:
1) Induction heating
2) Indirect arc heating
3) eddy current heating
4) radiant heating

Correct Answer: Induction heating

QID : 666 - The danger of electric shock is maximum _____.

Options:
1) before welding
2) during welding
3) while inserting electrode into the holder
4) after welding

Correct Answer: while inserting electrode into the holder

QID : 667 - Halogen lamps have the advantages of _____.

Options:
1) reduced dimensions of the lamp
2) better colour rendition and longer life (about 2000 hours)

3) high operating temperature with increased luminous efficiency
4) All of these

Correct Answer: All of these

QID : 668 - The primary reason for low power factor is owing to installation of _____.

Options:
1) synchronous motor
2) dc motors
3) induction motor
4) None of these

Correct Answer: induction motor

QID : 669 - The load factor for domestic loads may be taken as _____.

Options:
1) about 85%
2) 50 – 60%
3) 25 – 50%
4) 10 – 15%

Correct Answer: 10 – 15%

QID : 670 - An industrial consumer has a load pattern of 2000 kW 0.8 lag for 12 hours and 1000 kW unity power factor for 12 hours. The load factor is _____.

Options:
1) 0.5

2) 0.75

3) 0.6

4) 2

Correct Answer: 0.6

QID : 671 - Diversity factor is the ratio of _____.

Options:
1) sum of maximum demands of consumers/system maximum demand
2) maximum demand of consumers/average demand
3) demand of all consumers/average demand
4) none of these

Correct Answer: sum of maximum demands of consumers/system maximum demand

QID : 672 - Diversity factor x maximum demand is _____.

Options:
1) average demand
2) sum of consumer's maximum demands
3) installed capacity
4) generated capacity

Correct Answer: sum of consumer's maximum demands

QID : 673 - As per recommendation of ISI the maximum number of points of lights, fans, and socket that can be connected in one sub-circuit is _____.

Options:

1) 8

2) 10

3) 15

4) 20

Correct Answer: 10

QID : 674 - Which of the following wiring is preferred for workshop lighting?

Options:

1) casing-capping wiring
2) Batten wiring
3) Concealed conduit wiring
4) Surface conduit wiring

Correct Answer: Concealed conduit wiring

QID : 675 - According to fuse law, the current carrying capacity varies as _____.

Options:

1) diameter
2) (diameter)1.5
3) (diameter)1/2
4) 1/(diameter)

Correct Answer: (diameter)1.5

QID : 676 - The loop earth wire used shall not be of size less than _____.

Options:

1) 8 SWG
2) 10 SWG
3) 20 SWG
4) 14 SWG (2.9 mm2) or half of the size of the sub-circuit wireQ

Correct Answer: 14 SWG (2.9 mm2) or half of the size of the sub-circuit wireQ

QID : 677 - Third pin in a 3-pin plug is provided so as to _____.

Options:

1) provide an earth connection
2) provide a 3-phase supply, when required
3) provide a spare phase when required
4) prevent the plug being reversed in the socket

Correct Answer: provide an earth connection

QID : 678 - Which one of the following is used as an active device in electronic circuits?

Options:

1) Transformer

2) Electric heater

3) SCR

4) Loudspeaker

Correct Answer: SCR

QID : 679 - A device having characteristics very close to that of an ideal voltage source is _____.

Options:

1) Vacuum diode

2) Zener diode

3) Transistor

4) FET

Correct Answer: Zener diode

QID : 680 - For thermionic emission _____.

Options:

1) a material with high work function is preferable

2) a material with low work function is preferable

3) the work function of the material has no importance

4) None of these

Correct Answer: a material with low work function is preferable

QID : 681 - A photocell is illuminated by a small bright source placed 1 m away. When the same source of light is placed two metres away, the electrons emitted by the photocathode _____.

Options:

1) each carry one quarter of their previous energy

2) each carry one quarter of their previous moments

3) are half as numerous

4) are one-quarter as numerous

Correct Answer: are one-quarter as numerous

QID : 682 - In a vacuum tetrode secondary emission is because of emission of _____.

Options:

1) electrons from the filament due to heat energy

2) high velocity electrons from the cathode

3) electrons from the plate due to bombardment of the fast moving electrons emitted from the cathode

4) electrons belonging to the second orbit of the atoms of cathode

Correct Answer: electrons from the plate due to bombardment of the fast moving electrons emitted from the cathode

QID : 683 - Which of the following circuit is mostly used as an amplifier?

Options:

1) common base circuit because it has high voltage gain

2) common emitter circuit because it has high voltage and current gain
3) common collector circuit because it has high gain
4) common emitter circuit is of a little use because it has extremely low input resistance

Correct Answer: common emitter circuit because it has high voltage and current gain

QID : 684 - In a dc compound motor, 4-point starter provided as _____.

Options:
1) to reduce the field current
2) to increase the field current
3) not to affect the current flowing through 'Hold on' coil even when the field current changes
4) none of these

Correct Answer: not to affect the current flowing through 'Hold on' coil even when the field current changes

QID : 685 - The simplest form of a motor controller is _____.

Options:
1) relay
2) toggle switch
3) drum switch
4) magnetic switch

Correct Answer: toggle switch

QID : 686 - The plugging provides _____ braking torque in comparison to rheostatic and regenerative braking systems.

Options:
1) negligible
2) small
3) highest
4) None of these

Correct Answer: highest

QID : 687 - Dynamic braking is very effective if the dc motor _____.

Options:
1) is series excited
2) is shunt excited
3) is separately excited
4) has cumulative compound excitation

Correct Answer: is separately excited

QID : 688 - In case of dc shunt motors, the regenerative braking is employed when the load _____.

Options:
1) has an overhauling characteristic
2) is variable
3) is constant
4) also acts as braking force

Correct Answer: has an overhauling characteristic

QID : 689 - The variable loss in a dc shunt machine is _____.

Options:
1) iron loss
2) shunt field loss
3) armature copper loss
4) friction and windage loss

Correct Answer: armature copper loss

QID : 690 - In a synchronous generator, a divided winding rotor is preferable to a conventional winding rotor because of _____.

Options:
1) higher efficiency
2) increased steady-state stability limit
3) higher short circuit ration
4) better damping

Correct Answer: increased steady-state stability limit

QID : 691 - The stator winding of an alternator is normally connected in star to eliminate the _____ harmonic component of the voltage waveform.

Options:
1) third
2) fifth
3) seventh
4) None of these

Correct Answer: third

QID : 692 - How can the reactive power delivered by a synchronous generator be controlled?

Options:
1) by changing the prime mover input
2) by changing the excitation
3) by changing the direction of rotation
4) by changing the prime mover speed

Correct Answer: by changing the excitation

QID : 693 - The armature reaction effect in a synchronous machine depends on _____.

Options:
1) load current
2) power factor of the load
3) speed of the machine
4) both load current and power factor of the load

Correct Answer: both load current and power factor of the load

QID : 694 - A synchronous generator is feeding a zero power factor (lagging) load at rated current. The armature reaction is _____.

Options:

1) magnetizing
2) demagnetizing
3) cross-magnetizing
4) ineffective

Correct Answer: demagnetizing

QID : 695 - A synchronous motor may fail to pull into synchronism owing to _____.

Options:
1) excessive load
2) low excitation
3) high friction
4) Any of the options

Correct Answer: Any of the options

QID : 696 - The rated voltage of a 3-phase power system is given as _____.

Options:
1) rms phase voltage
2) peak phase voltage
3) rms line to line voltage
4) peak line to line voltage

Correct Answer: rms line to line voltage

QID : 697 - Feeder is designed mainly from the point of view of _____.

Options:
1) its current carrying capacity
2) voltage drop in it
3) operating voltage
4) operating frequency

Correct Answer: its current carrying capacity

QID : 698 - 66 kV is suitable for transmission of power over _____.

Options:
1) 30 km
2) 60 km
3) 120 km
4) 200 km

Correct Answer: 60 km

QID : 699 - Which of the following properties has got higher value for aluminium in comparison to that of copper?

Options:
1) Electrical resistivity
2) Melting point
3) Thermal conductivity
4) Specific gravity

Correct Answer: Electrical resistivity

QID : 700 - ACSR conductors have _____.

Options:

1) all conductors made of aluminium

2) outer conductors made of aluminum

3) inner conductors made of aluminum

4) no conductors made of aluminum

Correct Answer: outer conductors made of aluminum