PSPCL JE

EE_2018

Section : **Domain**

Q.1 In an electric drive using a three-phase induction motor, it is intended to apply regenerative braking. This is possible only if:

Ans ✔ 1.

the rotor speed is greater than the speed of the magnetic field produced by stator currents, both rotating in the same direction.

✘ 2.

the rotor speed is equal to the speed of the magnetic field produced by stator currents, both rotating in the same direction.

✘ 3.

the rotor speed is greater than the speed of the magnetic field produced by stator currents, both rotating in opposite directions.

✘ 4.

the rotor speed is less than the speed of the magnetic field produced by stator currents, both rotating in the same direction.

Question ID : **3675233773**

Status : **Answered**

Chosen Option : **3**

Marks : **-0.25**

Q.2 If a series resonant circuit has a resistance of 1 kΩ and half-power frequencies of 10 and 90 kHz, then the bandwidth and resonant frequency of the circuit, respectively, are:

Ans ✘ 1. 9 kHz and 40 kHz

✔ 2. 80 kHz and 30 kHz

✘ 3. 40 kHz and 10 kHz

✘ 4. 100 kHz and 9 kHz

Question ID : **3675233778**

Status : **Answered**

Chosen Option : **2**

Marks : **1.00**

Q.3 The maximum demand on a power-generating station is 500 MW. If the annual load factor is 50%, the total energy generated annually is:

Ans ✘ 1. 9125×10^5 kWh

✘ 2. 1825×10^5 kWh

✘ 3. 438×10^7 kWh

✔ 4. 219×10^7 kWh

Question ID : **3675233763**

Status : **Answered**

Chosen Option : **2**

Marks : **-0.25**

Q.4 Transmission efficiency is defined as:

Ans ✔ 1. receiving end power/sending end power

✘ 2.

total loss in the transmission line/receiving end power

✘ 3. receiving end current/sending end current

✘ 4. receiving end voltage/sending end voltage

Question ID : **3675233781**

Status : **Answered**

Chosen Option : **4**

Marks : **-0.25**

Q.5 A coil having a resistance of 8 Ω and inductance of 2 H is switched across a 48-V DC supply. The time constant of the circuit and the final value of the current in the circuit, respectively, are:

Ans
✗ 1. 0.4 and 24 A
✗ 2. 0.2 and 4.8 A
✗ 3. 0.25 and 8 A
✓ 4. 0.25 and 6 A

Question ID : **3675233758**

Status : **Answered**

Chosen Option : **2**

Marks : **-0.25**

Q.6 Buchholz relay is used to protect the:

Ans
✗ 1. alternators against all internal faults
✗ 2. transmission lines against all short circuit faults
✓ 3. oil-immersed transformers against all internal faults
✗ 4. synchronous motors against all internal faults

Question ID : **3675233769**

Status : **Answered**

Chosen Option : **3**

Marks : **1.00**

Q.7 A series RLC circuit resonates at 1.5 kHz and consumes 50 W from a 50-V AC source operating at resonant frequency. If the bandwidth is 0.75 kHz, then what are the values of the circuit elements R and L?

Ans
✗ 1. 25 Ω and 5.31 mH
✓ 2. 50 Ω and 10.6 mH
✗ 3. 50 Ω and 16.6 mH
✗ 4. 2.5 Ω and 1.06 mH

Question ID : **3675233814**

Status : **Answered**

Chosen Option : **2**

Marks : **1.00**

Q.8 For C coils and P poles, the commutator pitch for simplex wave winding is:

Ans
✗ 1. $\frac{2C\pm1}{P/2}$
✗ 2. $\frac{2C+1}{P/2}$
✗ 3. $\frac{2C-2}{P/2}$
✓ 4. $\frac{C\pm1}{P/2}$

Question ID : **3675233805**

Status : **Answered**

Chosen Option : **1**

Marks : **-0.25**

Q.9 Speed of the rotating field produced by rotor currents with respect to the rotor, in a 6-pole, three-phase induction motor when operating at a slip of 0.05 and when supplied with a three-phase voltage of 400 V 50 Hz is:

Ans
✗ 1. 1000
✗ 2. 500
✓ 3. 50
✗ 4. 100

Question ID : **3675233756**

Status : **Answered**

Chosen Option : **1**

Marks : **-0.25**

Q.10 The resistance of the pressure coil and the current coil of a wattmeter are 8000 Ω and 0.03 Ω, respectively. It is connected to measure the power in a single-phase circuit with a load taking a current of 40 A at a power factor of 0.8, with a voltage of 200 V. It is connected in such a way that the pressure coil is on the load side. What will be the percentage error in the wattmeter reading?

Ans
✗ 1. 0.78%
✗ 2. 7.8%
✓ 3. 0.078%

Question ID : **3675233767**

Status : **Answered**

Chosen Option : **1**

Marks : **-0.25**

4. 0.0078%

Q.11 The Bill on the Sexual Harassment at the Workplace [The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Bill, 2012] got passed in the year 2012 in:

Ans ✔ 1. Only Lok Sabha

✘ 2. Only Rajya Sabha

✘ 3. Rajya Sabha and Lok Sabha

✘ 4. President Approval

Question ID : **3675233818**

Status : **Answered**

Chosen Option : **3**

Marks : **-0.25**

Q.12 A 200 CP lamp is hung 4 metre above the centre of a circular area of diameter 5 m. The illumination at the centre of the area will be:

Ans ✘ 1. 12.73 lux

✘ 2. 8 lux

✔ 3. 12.5 lux

✘ 4. 15.92 lux

Question ID : **3675233796**

Status : **Answered**

Chosen Option : **2**

Marks : **-0.25**

Q.13 A motor has to supply the following load cycle to a varying load: 20 kW for 10 seconds, 10 kW for 20 seconds, 30 kW for 10 seconds and idle for 10 seconds in one load cycle. What will be the size of the motor required?

Ans ✔ 1. $\sqrt{300}$

✘ 2. $\sqrt{350}$

✘ 3. $\sqrt{375}$

✘ 4. $\sqrt{325}$

Question ID : **3675233780**

Status : **Answered**

Chosen Option : **4**

Marks : **-0.25**

Q.14 The voltage applied to a transformer is increased by 20% and the frequency is reduced by 20%. Assuming the magnetic circuit is unsaturated, the maximum core density will be:

Ans ✘ 1. 4 times the original value

✘ 2. 3 times the original value

✘ 3. 0.67 times the original value

✔ 4. 1.5 times the original value

Question ID : **3675233794**

Status : **Answered**

Chosen Option : **4**

Marks : **1.00**

Q.15 Which of the following circuits has no transients?

Ans ✘ 1.
Circuit consisting of resistance, inductance and capacitance

✘ 2.
Circuit consisting of inductance and capacitance

✔ 3. Pure resistive circuit

✘ 4.
Circuit consisting of resistance and capacitance

Question ID : **3675233751**

Status : **Answered**

Chosen Option : **3**

Marks : **1.00**

Q.16 The motor best suited for DC traction is:

Ans ✘ 1. DC shunt motor

✘ 2. DC differentially compounded motor

✔ 3. DC series motor

✘ 4. stepper motor

Question ID : **3675233770**

Status : **Answered**

Chosen Option : **3**

Marks : **1.00**

Q.17 Form factor of a sawtooth waveform with a period of 3 s and a peak voltage of 150 V is:

Ans
✗ 1. 2.155
✗ 2. 2.555
✔ 3. 1.155
✗ 4. 0.555

Question ID : **3675233752**
Status : **Answered**
Chosen Option : **3**
Marks : **1.00**

Q.18 A coil of 500 turns wound on a core of non-magnetic material has an inductance of 20 mH. The average value of the EMF induced when a current of 2 A is reversed in 5 ms is:

Ans
✗ 1. 8 V
✔ 2. 16 V
✗ 3. 6 V
✗ 4. 24 V

Question ID : **3675233757**
Status : **Answered**
Chosen Option : **3**
Marks : **-0.25**

Q.19 The stator of a three-phase, 4-pole alternator accommodates a single-layer three-phase winding in 36 slots. If the coil span of the winding is 120 electrical degrees, then the distribution factor is:

Ans
✗ 1. $\dfrac{\sin(10)}{3\sin(30)}$

✗ 2. $\dfrac{\sin(20)}{3\sin(60)}$

✔ 3. $\dfrac{\sin(30)}{3\sin(10)}$

✗ 4. $\dfrac{\sin(60)}{3\sin(20)}$

Question ID : **3675233792**
Status : **Answered**
Chosen Option : **3**
Marks : **1.00**

Q.20 In a tank circuit, where V is the initial voltage to which the capacitor is charged, C is the capacitance of the tank circuit and L is the inductance of the tank circuit, the peak value of the circulating current is given by which of the following expressions?

Ans
✗ 1. $I = V\sqrt{L/C}$
✗ 2. $I = V\sqrt{LC}$
✗ 3. $I = V/\sqrt{LC}$
✔ 4. $I = V\sqrt{C/L}$

Question ID : **3675233760**
Status : **Answered**
Chosen Option : **1**
Marks : **-0.25**

Q.21 A slip test is conducted on a synchronous generator to determine:

Ans
✗ 1. positive and negative sequence reactance
✗ 2. sub-transient reactance
✔ 3. direct and quadrature axis reactance
✗ 4. slip

Question ID : **3675233787**
Status : **Answered**
Chosen Option : **2**
Marks : **-0.25**

Q.22 A Murray loop test is conducted on a 400-m-long faulty cable. At balance, the resistance connected to the faulty core was set to 40 Ω and the resistance of the resistor connected to the sound core was 60 Ω. What is the distance of the fault from the test end?

Ans
✗ 1. 267 m
✗ 2. 217 m
✗ 3. 160 m
✔ 4. 320 m

Question ID : **3675233783**
Status : **Answered**
Chosen Option : **1**
Marks : **-0.25**

Q.23

What do you understand by company's microenvironment?

Ans ✔ 1.
A company's departments, suppliers and other publics which make up its value delivery chain and matter the most.

✗ 2.
A company's operating policies and principles.

✗ 3.
The detailed processes needed to achieve quality control in the firm.

✗ 4.
The machines and tools a company uses to make and promote the products.

Question ID : 3675233817
Status : Answered
Chosen Option : 1
Marks : 1.00

Q.24 A transformer rated for 5 kVA, 400 V / 200 V, 50 Hz, has a leakage impedance of $z = r + jx$ referred to HV side. Its voltage regulation at full load will be maximum at a power factor of:

Ans ✗ 1. r/z leading

✗ 2. r/x lagging

✗ 3. x/z leading

✔ 4. r/z lagging

Question ID : 3675233759
Status : Answered
Chosen Option : 3
Marks : -0.25

Q.25 Which of the following motors is not self-starting?

Ans ✗ 1. DC series motor

✗ 2. DC shunt motor

✔ 3. Single-phase induction motor

✗ 4. Three-phase induction motor

Question ID : 3675233772
Status : Answered
Chosen Option : 3
Marks : 1.00

Q.26 A wattmeter having a range of 4000 W has an error of $\pm 2\%$ of full-scale deflection. If the true power is 2000 W, what would be the range of the reading?

Ans ✗ 1. 1920 – 2000 W

✗ 2. 2000 – 2080 W

✗ 3. 1920 – 2040 W

✔ 4. 1920 – 2080 W

Question ID : 3675233803
Status : Answered
Chosen Option : 4
Marks : 1.00

Q.27 If a delta-connected 6-pole 50-Hz induction motor has a rotor resistance of 0.15 Ω per phase and exerts the maximum torque at 880 rpm, then the percentage maximum torque that will be exerted at standstill is:

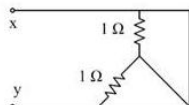Ans ✗ 1. 33.43%

✗ 2. 11.83%

✗ 3. 47.32%

✔ 4. 23.66%

Question ID : 3675233788
Status : Answered
Chosen Option : 1
Marks : -0.25

Q.28 What is the equivalent resistance between terminals x and y for the given circuit?

Ans ✗ 1. 0.5 Ω

✔ 2. 0 Ω

✗ 3. 2 Ω

✗ 4. 1 Ω

Question ID : 3675233813
Status : Answered
Chosen Option : 2
Marks : 1.00

Q.29 The type of DC motor in which an increase in load causes an increase in the speed of the motor is called:

Ans
  ✗ 1. shunt motor
  ✗ 2. series motor
  ✔ 3. differentially compounded motor
  ✗ 4. cumulatively compounded motor

Question ID : **3675233800**
Status : **Answered**
Chosen Option : **4**
Marks : **-0.25**

Q.30 The maximum operating frequency for a diode with a reverse recovery time of 4 ns is approximately:

Ans
  ✔ 1. 25 MHz
  ✗ 2. 30 MHz
  ✗ 3. 50 MHz
  ✗ 4. 10 MHz

Question ID : **3675233808**
Status : **Answered**
Chosen Option : **4**
Marks : **-0.25**

Q.31 Projection welding can be considered as a mass production form of:

Ans
  ✔ 1. spot welding
  ✗ 2. flash welding
  ✗ 3. upset welding
  ✗ 4. seam welding

Question ID : **3675233806**
Status : **Answered**
Chosen Option : **1**
Marks : **1.00**

Q.32 In which of the following transformers is the secondary current of the same order as that of the magnetising current?

Ans
  ✔ 1. Potential transformers
  ✗ 2. Current transformers
  ✗ 3. Power transformers
  ✗ 4. Distribution transformers

Question ID : **3675233785**
Status : **Answered**
Chosen Option : **2**
Marks : **-0.25**

Q.33 Voltage and current in a single-phase AC circuit are given by (50 + j20) V and (20 + j50) A, respectively. Power of the circuit can be expressed in complex form as:

Ans
  ✗ 1. $(2500 - j0)$
  ✗ 2. $(0 - j2500)$
  ✗ 3. $(2100 - j2000)$
  ✔ 4. $(2000 - j2100)$

Question ID : **3675233750**
Status : **Answered**
Chosen Option : **1**
Marks : **-0.25**

Q.34 The speed of a three-phase induction motor is controlled by using a VSI. The voltage supplied by the VSI contains harmonics. Which among the following is the positive-sequence harmonic?

Ans
  ✗ 1. Third
  ✔ 2. Seventh
  ✗ 3. Seventeenth
  ✗ 4. Fifth

Question ID : **3675233802**
Status : **Answered**
Chosen Option : **4**
Marks : **-0.25**

Q.35 In a 6-pole DC machine, with lap winding, the number of parallel paths in the armature will be:

Ans
  ✗ 1. 3
  ✔ 2. 6
  ✗ 3. 4
  ✗ 4. 2

Question ID : **3675233804**
Status : **Answered**
Chosen Option : **2**
Marks : **1.00**

Q.36 The surge impedance of a long transmission line is given by:

Ans
✗ 1. $\sqrt{Y/Z}$

✗ 2. $\sqrt{L/C}$

✗ 3. $\sqrt{R/Y}$

✓ 4. $\sqrt{Z/Y}$

Question ID : **3675233774**
Status : **Answered**
Chosen Option : **4**
Marks : **1.00**

Q.37 A 220-V DC machine has an armature resistance of 1 Ω. If the full-load current is 20 A, the difference between the induced voltage when the machine runs as motor and as generator is:

Ans
✗ 1. 20 V

✗ 2. 10 V

✓ 3. 40 V

✗ 4. 0 V

Question ID : **3675233789**
Status : **Answered**
Chosen Option : **3**
Marks : **1.00**

Q.38 The dielectric loss of an electrical system is 100 W when operating with a particular voltage. If the voltage of the system is doubled, then the dielectric loss will be:

Ans
✗ 1. 100 W

✗ 2. 50 W

✓ 3. 400 W

✗ 4. 200 W

Question ID : **3675233777**
Status : **Answered**
Chosen Option : **3**
Marks : **1.00**

Q.39 The material used for a fuse must have:

Ans
✓ 1. low melting point and high conductivity

✗ 2. high melting point and high conductivity

✗ 3. high melting point and low conductivity

✗ 4. low melting point and low conductivity

Question ID : **3675233782**
Status : **Answered**
Chosen Option : **1**
Marks : **1.00**

Q.40 Which of the following gives the correct order (from deepest level to surface level) of the three levels of organisational culture?

Ans
✗ 1. Values, Artifacts and Assumptions

✗ 2. Artifacts, Values and Assumptions

✓ 3. Assumptions, Values and Artifacts

✗ 4. Values, Assumptions and Artifacts

Question ID : **3675233815**
Status : **Answered**
Chosen Option : **4**
Marks : **-0.25**

Q.41 Dielectric heating is used for heating:

Ans
✗ 1. furnaces

✗ 2. zinc cells

✓ 3. wood

✗ 4. steel sheets

Question ID : **3675233768**
Status : **Answered**
Chosen Option : **2**
Marks : **-0.25**

Q.42 A moving coil ammeter can be used to measure:

Ans
✗ 1. direct and alternating currents

✗ 2. low-frequency alternating current

Question ID : **3675233764**
Status : **Answered**
Chosen Option : **3**
Marks : **1.00**

✓ 3. DC current

✗ 4. high-frequency alternating current

Q.43 Two alternators A and B are operating in parallel. If the excitation of A is increased, then:

Ans ✗ 1.

the reactive power of A is increased while that of B is unchanged.

✗ 2. the reactive power of A is decreased.

✗ 3.

both real and reactive power of A are increased.

✓ 4.

the reactive power of A is increased while that of B is decreased.

Question ID : **3675233807**

Status : **Answered**

Chosen Option : **4**

Marks : **1.00**

Q.44 If the secondary winding of a current transformer is opened when the primary winding is carrying current, then the following event occurs:

Ans ✗ 1. Transformer will burn immediately.

✓ 2.

High induced EMF is produced in the secondary winding.

✗ 3. Flux density in the core gets weakened.

✗ 4.

High current is produced in the secondary winding.

Question ID : **3675233786**

Status : **Answered**

Chosen Option : **2**

Marks : **1.00**

Q.45 Which of the following insulators is selected for HV application?

Ans ✗ 1. Disc type

✗ 2. Strain type

✗ 3. Pin type

✓ 4. Suspension type

Question ID : **3675233776**

Status : **Answered**

Chosen Option : **4**

Marks : **1.00**

Q.46 The mean spherical candle power of a lamp that emits a total flux of light of 1500 lumen is:

Ans ✗ 1. $1500 \times 4\pi$

✗ 2. $1500 \times 2\pi$

✗ 3. $1500 / 2\pi$

✓ 4. $1500 / 4\pi$

Question ID : **3675233797**

Status : **Answered**

Chosen Option : **3**

Marks : **-0.25**

Q.47 A single-phase motor takes 50 A at a power factor angle of 30° lagging from a 250-V, 50-Hz AC supply. What value of capacitance must a shunting capacitor have to raise the power factor to unity?

Ans ✗ 1. 212.3 μF

✗ 2. 838.6 μF

✗ 3. 636.6 μF

✓ 4. 318.3 μF

Question ID : **3675233798**

Status : **Answered**

Chosen Option : **3**

Marks : **-0.25**

Q.48 An RLC series circuit has a resistance of 2 Ω, inductive reactance of 2 Ω and capacitive reactance of 1 Ω when connected across a 200-V, 50-Hz supply. If the frequency of the supply is now changed to 25 Hz, then power factor of the circuit will be:

Ans ✓ 1. $\frac{2}{\sqrt{5}}$ leading

Question ID : **3675233799**

Status : **Answered**

Chosen Option : **2**

Marks : **-0.25**

❌ 2. $\frac{2}{\sqrt{5}}$ lagging

❌ 3. $\frac{2}{\sqrt{13}}$ leading

❌ 4. $\frac{2}{\sqrt{13}}$ lagging

Q.49 In common emitter configuration of a transistor circuit, the common emitter forward amplification factor is given by the ratio:

Ans

✔️ 1. $\frac{I_C}{I_B}$

❌ 2. $\frac{I_E}{I_B}$

❌ 3. $\frac{I_C}{I_E}$

❌ 4. $\frac{I_B}{I_E}$

Question ID : **3675233810**
Status : **Answered**
Chosen Option : **1**
Marks : **1.00**

Q.50 In a 4-pole DC machine, number of cycles of voltage induced in one complete revolution of the armature is:

Ans

❌ 1. 4

❌ 2. 1

✔️ 3. 2

❌ 4. 8

Question ID : **3675233755**
Status : **Answered**
Chosen Option : **1**
Marks : **-0.25**

Q.51 A two-wire 1000-m-long DC distributor cable is loaded with 0.5 A/m. Resistance of each of the conductors is 0.05 Ω/km. If the distributor is fed from both ends with equal voltages of 220 V, the maximum voltage drop will be:

Ans

❌ 1. 4.8 V

❌ 2. 5.2 V

✔️ 3. 6.25 V

❌ 4. 2.4 V

Question ID : **3675233761**
Status : **Answered**
Chosen Option : **3**
Marks : **1.00**

Q.52 The systematic collection of performance data as well as feedback of an individual derived from many stakeholders is called:

Ans

✔️ 1. 360 degree appraisal

❌ 2. Confidential reports

❌ 3. 240 degree appraisal

❌ 4. 120 degree appraisal

Question ID : **3675233816**
Status : **Answered**
Chosen Option : **4**
Marks : **-0.25**

Q.53 In a transformer, what is the phasor relationship of the loss component of no-load current with the mutual flux?

Ans

❌ 1. Out of phase with the flux

❌ 2. Lags flux by 90°

✔️ 3. Leads flux by 90°

❌ 4. In phase with the flux

Question ID : **3675233793**
Status : **Answered**
Chosen Option : **4**
Marks : **-0.25**

Q.54 Protection against negative sequence currents is provided for:

Ans

❌ 1. transformers

✔️ 2. generators

Question ID : **3675233775**
Status : **Answered**
Chosen Option : **4**

✗ 3. motors

✗ 4. transmission lines

Marks : -0.25

Q.55 Two inductive reactances of 20 Ω and 5 Ω are connected in parallel across a 220 V 50 Hz sinusoidally varying voltage. Effective value of the inductive reactance seen by the source if source voltage and frequency are changed to 110 V and 25 Hz is:

Ans ✗ 1. 5 Ω

✗ 2. 1 Ω

✔ 3. 2 Ω

✗ 4. 4 Ω

Question ID : 3675233754

Status : **Answered**

Chosen Option : **2**

Marks : **-0.25**

Q.56 A 240-V DC series motor takes 40 A when giving its rated torque at 1500 rpm, operating in the linear region of magnetisation characteristics. If the armature and field resistance together is 0.3 Ω, then the value of resistance to be added to obtain rated torque at 1000 rpm is:

Ans ✔ 1. 1.9 Ω

✗ 2. 1.6 Ω

✗ 3. 2.2 Ω

✗ 4. 2.5 Ω

Question ID : 3675233801

Status : **Answered**

Chosen Option : **3**

Marks : **-0.25**

Q.57 The current through an inductor of inductance 6 H varies linearly at a rate of 0.5 A/s. What will be the flux linkage in the system after the current has flown for 2 seconds?

Ans ✗ 1. 3 Wb-turn

✗ 2. 12 Wb-turn

✔ 3. 6 Wb-turn

✗ 4. 24 Wb-turn

Question ID : 3675233753

Status : **Answered**

Chosen Option : **3**

Marks : **1.00**

Q.58 A distribution transformer is usually a:

Ans ✗ 1. star/star transformer

✗ 2. delta/delta transformer
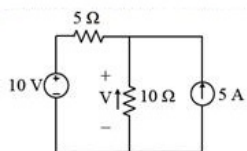
✗ 3. star/delta transformer

✔ 4. delta/star transformer

Question ID : 3675233771

Status : **Answered**

Chosen Option : **4**

Marks : **1.00**

Q.59 In the circuit shown, what is the voltage V across the 10-Ω resistor?

Ans ✗ 1. 6.67 V

✗ 2. 10.03 V

✗ 3. 16.7 V

✔ 4. 23.34 V

Question ID : 3675233811

Status : **Answered**

Chosen Option : **1**

Marks : **-0.25**

Q.60 For the transmission of a given amount of power, if the transmission voltage is increased, then the volume of conductor material required:

Ans ✗ 1. remains the same

✔ 2. decreases

✗ 3. increases

✗ 4.

Question ID : 3675233784

Status : **Answered**

Chosen Option : **2**

Marks : **1.00**

increases in proportion with the increase in voltage

Q.61 A 2000/1000/500-V, single-phase, three-winding autotransformer is to be used as an autotransformer with a supply voltage of 3000 V. Two loads, one of 1050 kVA at 3500 V and the other of 180 kVA at 1000 V, are to be energised from this autotransformer output. The currents in the three parts of the winding are:

Ans ✗ 1. 100 A, 210 A, 80 A

✗ 2. 80 A, 320 A, 410 A

✗ 3. 180 A, 120 A, 410 A

✔ 4. 110 A, 70 A, 300 A

Question ID : 3675233791
Status : **Answered**
Chosen Option : **2**
Marks : **-0.25**

Q.62 The solid angle subtended by a sphere at its centre is:

Ans ✗ 1. 2π steradians

✗ 2. 6π steradians

✗ 3. π steradians

✔ 4. 4π steradians

Question ID : 3675233795
Status : **Answered**
Chosen Option : **3**
Marks : **-0.25**

Q.63 A generating station supplies the following loads to various consumers: industrial consumer, 750 MW; commercial establishment, 350 MW; domestic power, 10 MW; and domestic light, 50 MW. If the maximum demand on the station is 1000 MW, the diversity factor is:

Ans ✗ 1. 0.86

✔ 2. 1.16

✗ 3. 0.91

✗ 4. 1.1

Question ID : 3675233762
Status : **Answered**
Chosen Option : **2**
Marks : **1.00**

Q.64 Identify from the options given below, which one is NOT a source of business ethics?

Ans ✗ 1. Religion
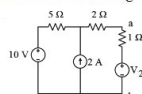
✗ 2. Culture

✗ 3. Legal system

✔ 4. Political system

Question ID : 3675233819
Status : **Answered**
Chosen Option : **4**
Marks : **1.00**

Q.65 In the circuit shown, what are the values of the internal resistance across the open-circuited terminals (a and b) and of the Thevenin's voltage between the terminals a and b?

Ans ✗ 1. 1.43 Ω and 12 V

✔ 2. 7 Ω and 20 V

✗ 3. 1 Ω and 11 V

✗ 4. 8 Ω and 10 V

Question ID : 3675233812
Status : **Answered**
Chosen Option : **2**
Marks : **1.00**

Q.66 If the voltage and current in an AC circuit are represented as $v = 240 \sin\left(314t - \frac{\pi}{6}\right)$ and $i = 40 \sin\left(314t + \frac{\pi}{3}\right)$, then the power factor of the circuit is:

Ans ✗ 1. 30° leading

✗ 2. unity

✗ 3. zero lagging

✔ 4. zero leading

Question ID : 3675233779
Status : **Answered**
Chosen Option : **2**
Marks : **-0.25**

Q.67 A 24-V, 600-mW Zener diode is to be used for providing a 24-V stabilised supply to a variable load. If the input voltage is 32 V, the value of the series resistance required is:

Ans
✗ 1. 1280 Ω
✗ 2. 426 Ω
✗ 3. 960 Ω
✔ 4. 320 Ω

Question ID : **3675233809**
Status : **Answered**
Chosen Option : **3**
Marks : **-0.25**

Q.68 Which of the following instruments has the same calibration in AC and DC?

Ans
✗ 1. Moving coil type
✔ 2. Electrodynamometer type
✗ 3. Induction type
✗ 4. Moving iron type

Question ID : **3675233765**
Status : **Answered**
Chosen Option : **4**
Marks : **-0.25**

Q.69 A squirrel-cage induction motor has a starting current of 6 times the full-load current and a full-load slip of 0.05. If it is started using a star-delta starter, the values of the starting line current and the starting torque, respectively, are:

Ans
✔ 1. 2 pu and 0.6 pu
✗ 2. 4 pu and 1.2 pu
✗ 3. 1.15 pu and 0.35 pu
✗ 4. 3.46 pu and 0.17 pu

Question ID : **3675233790**
Status : **Answered**
Chosen Option : **3**
Marks : **-0.25**

Q.70 The material used for the core of a current transformer should have:

Ans
✔ 1. low reluctance and low iron loss
✗ 2. high reluctance and low iron loss
✗ 3. high reluctance and high iron loss
✗ 4. low reluctance and high iron loss

Question ID : **3675233766**
Status : **Answered**
Chosen Option : **1**
Marks : **1.00**

Section : **General Knowledge**

Q.1 Export-Import bank of India was established in which year?

Ans
✗ 1. 1980
✗ 2. 1981
✔ 3. 1982
✗ 4. 1984

Question ID : **3675233823**
Status : **Answered**
Chosen Option : **4**
Marks : **-0.25**

Q.2 Where is the headquarters of the 'International Committee of the Red Cross' situated?

Ans
✔ 1. Geneva
✗ 2. New York
✗ 3. Madrid
✗ 4. Hague

Question ID : **3675233827**
Status : **Answered**
Chosen Option : **1**
Marks : **1.00**

Q.3 Which one of the following gases is considered to be a noble gas?

Ans
✔ 1. Krypton
✗ 2. Ethane
✗ 3. Hexane

Question ID : **3675233825**
Status : **Answered**
Chosen Option : **1**
Marks : **1.00**

✗ 4. Arsine

Q.4 The headquarters of 'Economic Commission of Africa' (ECA) is located at which place?

Ans
✗ 1. Nairobi
✔ 2. Addis Ababa
✗ 3. Cairo
✗ 4. Harare

Question ID : 3675233828
Status : **Answered**
Chosen Option : **3**
Marks : **-0.25**

Q.5 Which of the following are the working languages of the UNESCO?

Ans
✔ 1. French & English
✗ 2. English & Russian
✗ 3. French & German
✗ 4. English & German

Question ID : 3675233829
Status : **Answered**
Chosen Option : **2**
Marks : **-0.25**

Q.6 Which of the following provides resistance against diseases in the body?

Ans
✔ 1. White corpuscles
✗ 2. Vitamins
✗ 3. Red corpuscles
✗ 4. Platelets

Question ID : 3675233824
Status : **Answered**
Chosen Option : **1**
Marks : **1.00**

Q.7 What is the life span of RBC?

Ans
✗ 1. 100 days
✗ 2. 80 days
✗ 3. 160 days
✔ 4. 120 days

Question ID : 3675233826
Status : **Answered**
Chosen Option : **2**
Marks : **-0.25**

Q.8 When was the Pin Code system introduced in India?

Ans
✔ 1. 15 August 1972
✗ 2. 15 August 1971
✗ 3. 15 August 1970
✗ 4. 15 August 1974

Question ID : 3675233822
Status : **Answered**
Chosen Option : **2**
Marks : **-0.25**

Q.9 The sea-coast of which of the following states is the longest?

Ans
✗ 1. Maharashtra
✔ 2. Gujarat
✗ 3. Tamil Nadu
✗ 4. Andhra Pradesh

Question ID : 3675233821
Status : **Answered**
Chosen Option : **2**
Marks : **1.00**

Q.10 'Chholiya' is the famous dance form of which state?

Ans
✗ 1. Rajasthan

Question ID : 3675233820
Status : **Answered**
Chosen Option : **3**

✓ 2. Uttarakhand

✗ 3. Himachal Pradesh

✗ 4. Haryana

Marks : **-0.25**

Section : **Reasoning**

Q.1 In the set of letters, symbols and numbers given below, how many times does a vowel come immediately before a consonant but not immediately after a symbol?

G w @ a 0 0 2 l i P x * e g p s 2 @ u m * 5 S e f n e d % f u g * C 5 a Q v i x % N a m #

Ans

✗ 1. 4

✗ 2. 10

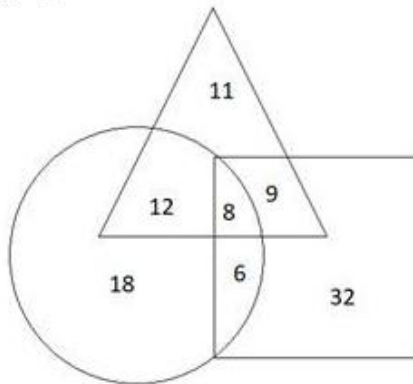✗ 3. 8

✓ 4. 6

Question ID : **3675233830**

Status : **Answered**

Chosen Option : **1**

Marks : **-0.25**

Comprehension:

The triangle represents children who play Chess, the circle represents children who play Hockey and the rectangle represents children who play Kabaddi.

Study the diagram above and answer the given questions.

SubQuestion No : 2

Q.2 What is the number of children who play all the three games?

Ans
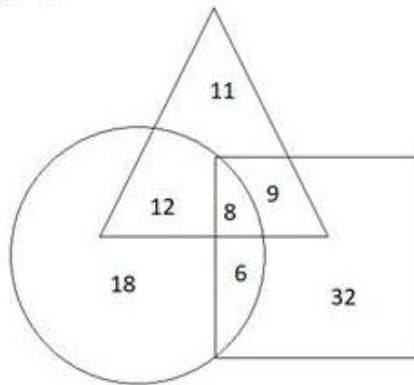
✗ 1. 12

✗ 2. 6

✗ 3. 9

✓ 4. 8

Question ID : **3675233833**

Status : **Answered**

Chosen Option : **4**

Marks : **1.00**

Comprehension:

The triangle represents children who play Chess, the circle represents children who play Hockey and the rectangle represents children who play Kabaddi.

Study the diagram above and answer the given questions.

SubQuestion No : 3

Q.3 What is the number of Hockey players who play any one of the other given games?

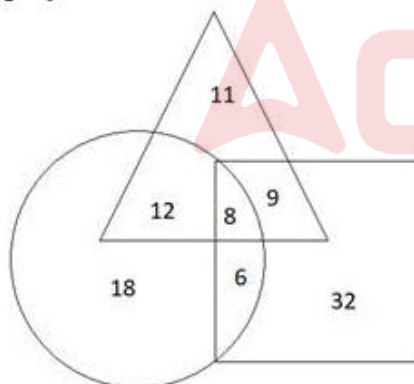Ans ✗ 1. 26

✗ 2. 36

✗ 3. 35

✔ 4. 18

Question ID : 3675233835
Status : **Answered**
Chosen Option : **4**
Marks : **1.00**

Comprehension:

The triangle represents children who play Chess, the circle represents children who play Hockey and the rectangle represents children who play Kabaddi.

Study the diagram above and answer the given questions.

SubQuestion No : 4

Q.4 What is the number of children who play either Kabaddi or Hockey or both but do not play Chess?

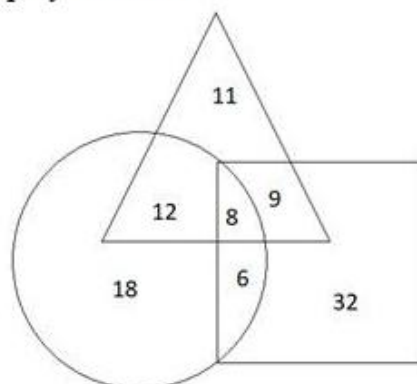Ans ✗ 1. 24

✗ 2. 50

✔ 3. 56

✗ 4. 38

Question ID : 3675233832
Status : **Answered**
Chosen Option : **4**
Marks : **-0.25**

Comprehension:

The triangle represents children who play Chess, the circle represents children who play Hockey and the rectangle represents children who play Kabaddi.

Study the diagram above and answer the given questions.

SubQuestion No : 5

Q.5 What is the number of children who play exactly two of the given games?

Ans
✗ 1. 21
✗ 2. 18
✗ 3. 15
✔ 4. 27

Question ID : 3675233834
Status : **Answered**
Chosen Option : **2**
Marks : **-0.25**

Q.6 If 'S' means 'Addition', '@' means 'Subtraction', '#' means 'Multiplication', and '©' means 'Division', then 95 © 5 # 2 S 7 @ 4 = ?

Ans
✔ 1. 41
✗ 2. 38
✗ 3. 49
✗ 4. 48

Question ID : 3675233840
Status : **Answered**
Chosen Option : **1**
Marks : **1.00**

Q.7 Five friends, Raunak, Akshay, Prem, Chang, and Melissa, are sitting around a circular table. Raunak is sitting immediately next to Akshay but not sitting immediately next to Prem. Akshay is not sitting next to Chang. Melissa is sitting to Raunak's immediate right. Prem is sitting to Akshay's immediate left. Chang is sitting between Prem and Melissa. Who is sitting between Akshay and Chang?

Ans
✗ 1. Cannot be determined
✗ 2. Raunak
✗ 3. Melissa
✔ 4. Prem

Question ID : 3675233837
Status : **Answered**
Chosen Option : **3**
Marks : **-0.25**

Q.8 Which two numbers will come in place of the two '?' in the series?

7, 16, 25, 34, 43, 52, ?, ?, 79

Ans
✗ 1. 59, 66
✗ 2. 57, 72
✗ 3. 60, 69
✔ 4. 61, 70

Question ID : 3675233838
Status : **Answered**
Chosen Option : **4**
Marks : **1.00**

Q.9 In a cricket match, Rahul scored 67 runs. Kapil scored 16 runs more than Rahul but 3 runs less than Vishwa. Srinath scored 4 runs less than Imran, and 2 runs more than Vishwa. Who scored the highest runs in the given match?

Ans ✗ 1. Kapil

✗ 2. Vishwa

✓ 3. Imran

✗ 4. Srinath

Question ID : 3675233836
Status : **Answered**
Chosen Option : **4**
Marks : **-0.25**

Q.10 What will come in place of '?' in the series?

2, 6, 12, 20, ?, 42, 56

Ans ✗ 1. 32

✗ 2. 28

✓ 3. 30

✗ 4. 36

Question ID : 3675233839
Status : **Answered**
Chosen Option : **3**
Marks : **1.00**

Section : **General English**

Q.1 The following sentence is divided into three parts. Identify the part that has an error in it. If there is no error, mark the option 'No error' as your answer.

Initially, the film Gandhi was rejected by many producers, / but Attenborough's perseverance / brings out a classic movie about Gandhi.

Ans ✗ 1.

Initially, the film Gandhi was rejected by many producers

✓ 2. brings out a classic movie about Gandhi

✗ 3. but Attenborough's perseverance

✗ 4. No error

Question ID : 3675233848
Status : **Answered**
Chosen Option : **2**
Marks : **1.00**

Q.2 Select the most appropriate adjective to fill in the blank.

The lawyer asked his subordinate to read the _____ book of laws and keep the notes ready for the next case.

Ans ✗ 1. volume

✗ 2. volumes

✗ 3. flimsy

✓ 4. voluminous

Question ID : 3675233842
Status : **Answered**
Chosen Option : **1**
Marks : **-0.25**

Q.3 Select the most appropriate verb to fill in the blank.

If Ramanujam _____ here today, he would be amazed at the speed of the calculating ability of a computer.

Ans ✗ 1. is living

✓ 2. were

✗ 3. was

✗ 4. lives

Question ID : 3675233850
Status : **Answered**
Chosen Option : **3**
Marks : **-0.25**

Q.4 The following sentence is divided into three parts. Identify the part that has an error in it. If there is no error, mark the option 'No error' as your answer.

On reading the hidden document, / the realisation was dawned upon him / that he has been betrayed.

Ans ✗ 1. that he has been betrayed

✓ 2. the realisation was dawned upon him

✗ 3. No error

Question ID : 3675233846
Status : **Answered**
Chosen Option : **1**
Marks : **-0.25**

✗ 4. On reading the hidden document

Q.5 The following sentence is divided into three parts. Identify the part that has an error in it. If there is no error, mark the option 'No error' as your answer.

The government has appointed / the most acclaimed architecture company / to building the smart city.

Ans

✗ 1. No error

✗ 2. the most acclaimed architecture company

✗ 3. The government has appointed

✓ 4. to building the smart city

Question ID : **3675233847**

Status : **Answered**

Chosen Option : **4**

Marks : **1.00**

Q.6 Select the most appropriate option to fill in the blank.

I bought a _____ frock for my little grand-daughter from Vietnam.

Ans

✗ 1. pink gorgeous silk

✓ 2. gorgeous pink silk

✗ 3. silk gorgeous pink

✗ 4. gorgeous silk pink

Question ID : **3675233849**

Status : **Answered**

Chosen Option : **2**

Marks : **1.00**

Q.7 Select the most appropriate adjective to fill in the blank.

Dolly felt very _____ about leaving the US after her studies.

Ans

✓ 1. ambivalent

✗ 2. attitude

✗ 3. certainly

✗ 4. ambiguous

Question ID : **3675233843**

Status : **Answered**

Chosen Option : **4**

Marks : **-0.25**

Q.8 Select the most appropriate adverb to fill in the blank.

He _____ visited the orphanage to help the children in their studies, which gave him real joy.

Ans

✓ 1. frequently

✗ 2. quickly

✗ 3. swiftly

✗ 4. seldom

Question ID : **3675233845**

Status : **Answered**

Chosen Option : **4**

Marks : **-0.25**

Q.9 Select the most appropriate adjective to fill in the blank.

The ants are so _____ that people always quote them as an example for hard work.

Ans

✗ 1. industry

✗ 2. indigenous

✗ 3. industrial

✓ 4. industrious

Question ID : **3675233841**

Status : **Answered**

Chosen Option : **4**

Marks : **1.00**

Q.10 Select the most appropriate adverb to fill in the blank.

The minister _____ addressed the gathering to announce the death of the leader.

Ans

✗ 1. sorrowful

Question ID : **3675233844**

Status : **Answered**

Chosen Option : **1**

Marks : **-0.25**