Roll No:
Registration No:
Name:
Exam Date: **30-Jul-2021**
Exam Time: **16:00-18:00**
Post Name: **JE Electrcal**

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GENERAL KNOWLEDGE - GENERAL KNOWLEDGE

Question No.1 Marks: 1.00
Bookmark

In public sector, what is the full form of "LIC"?
(A) ○ **Life Insurance Corporation (Correct Answer)**
(B) ○ Life Insurance Company
(C) ○ Lively Insurance Corporation
(D) ○ Life Insurers Corporation

Question No.2 Marks: 1.00
Bookmark

As per Stockholm International Peace Research Institute (SIPRI) report 2019 for the period 2014-2018, which country is the largest arms importer in the world?
(A) ○ India
(B) ○ Myanmar
(C) ○ **Saudi Arabia (Correct Answer)**
(D) ○ Germany

Question No.3 Marks: 1.00
Bookmark

When was the Constitution of India adopted by the Constituent Assembly?
(A) ○ January 25 1930
(B) ○ **26th November 1949 (Correct Answer)**
(C) ○ 13th January 1950
(D) ○ 15th August 1947

Question No.4 Marks: 1.00
Bookmark

Arjuna Award' is awarded for the excellence in which field?
(A) ○ Mathematics
(B) ○ Science
(C) ○ Literature
(D) ○ **Sports (Correct Answer)**

Question No.5 Marks: 1.00
Bookmark

What is the full form of the acronym 'SWIFT', in financial institution?
(A) ○ **Society for Worldwide Interbank Financial Telecommunication (Correct Answer)**
(B) ○ Society website in Financial Terms
(C) ○ Social Wide in Financial Transaction
(D) ○ Social World interconnection in Financial Tech process

Question No.6 Marks: 1.00
Bookmark

Nairobi negotiations are related to which of the following Organisation?
(A) ○ The United Nations Children's Fund
(B) ○ UNESCO
(C) ○ World Economic Forum
(D) ○ **World Trade Organisation (Correct Answer)**

Question No.7 Marks: 1.00

Bookmark

The process of peeling of rocks into layers is called _____

(A) ○ Delta
(B) ○ Barchans
(C) ○ Sublimation
(D) ○ **Exfoliation (Correct Answer)**

Question No.8 Marks: 1.00

Bookmark

The International boundary 'Radcliffe Line' lies between India and _____

(A) ○ **Pakistan (Correct Answer)**
(B) ○ Afghanistan
(C) ○ Japan
(D) ○ China

Question No.9 Marks: 1.00

Bookmark

Tiger Woods is associated with which of the following fields?

(A) ○ Cinema
(B) ○ Politics
(C) ○ **Sports (Correct Answer)**
(D) ○ Literature

Question No.10 Marks: 1.00

Bookmark

Arunachal Pradesh does not share its borders with which one of the following nations?

(A) ○ Bhutan
(B) ○ **Bangladesh (Correct Answer)**
(C) ○ China
(D) ○ Myanmar

ENGLISH KNOWLEDGE - ENGLISH KNOWLEDGE

Question No.1 Marks: 1.00

Bookmark

Choose the word which best expresses the similar **meaning** of the given word " ABDICATE "

(A) ○ Pursue
(B) ○ **Relinquish (Correct Answer)**
(C) ○ Treasure
(D) ○ Continue

Question No.2 Marks: 1.00

Bookmark

Find the word which is correctly spelt from the given options.

(A) ○ **Syndrome (Correct Answer)**
(B) ○ Obecity
(C) ○ Seriuous
(D) ○ Abolishid

Question No.3 Marks: 1.00

Bookmark

Replace the underlined phrase grammatically and conceptually with the help of the given options. If the given sentence is correct then select the option 'The given sentence is correct'.

The corono virus **<u>continued to spread, with the development of infections</u>** advancing quickly

(A) ○ **The given sentence is correct (Correct Answer)**
(B) ○ continue to spread, with the development of infections

(C) ○ continued to spreading, with the development of infections
(D) ○ continued for spread, with the development of infections

Question No.4 Marks: 1.00
Bookmark

Choose the best option from the given alternatives which can be substituted for the given word/sentence.

Code of diplomatic etiquette and precedence
(A) ○ **Protocol (Correct Answer)**
(B) ○ Sheath
(C) ○ Wardrobe
(D) ○ Secular

Question No.5 Marks: 1.00
Bookmark

In the following question, one part of the sentence may have an error. Find out which part of the sentence has an error and select the option corresponding to it. If the sentence contains no error, Select "No error" option. (Avoid punctuation errors)

(A) The boys campaigned / (B) not only in / (C) Mumbai also in Chennai / (D) NO ERROR
(A) ○ D
(B) ○ **C (Correct Answer)**
(C) ○ B
(D) ○ A

Question No.6 Marks: 1.00
Bookmark

Choose the word which expresses nearly the **opposite** meaning of the given word " DILIGENT "
(A) ○ Careful
(B) ○ Active
(C) ○ Busy
(D) ○ **Lazy (Correct Answer)**

Question No.7 Marks: 1.00
Bookmark

Find the word which is correctly spelt from the given options.

(A) ○ Idantical
(B) ○ Clasification
(C) ○ **Profitable (Correct Answer)**
(D) ○ Dimnished

Question No.8 Marks: 1.00
Bookmark

Rearrange the following to form a meaningful sentence and find the most logical order from the given options.

P: globally, out of which over 200 million
Q: are now in India, and
R: flipkart has 700 million users
S: growing exponentially
(A) ○ PQRS
(B) ○ **RPQS (Correct Answer)**
(C) ○ RPSQ
(D) ○ RSQP

Question No.9 Marks: 1.00
Bookmark

Fill in the blanks with suitable Preposition from the given alternatives.

BCCI receives _____ 1000 applications for Team India head coach position

(A) ○ against

(B) ○ for

(C) ○ since

(D) ○ **over (Correct Answer)**

Question No.10 Marks: 1.00

Bookmark

Fill in the blanks with suitable Article from the given alternatives.

Everyone is ready to accept _____ new rules framed by the executive body

(A) ○ **the (Correct Answer)**

(B) ○ an

(C) ○ a

(D) ○ No article

ELECTRICAL ENGINEERING - ELECTRICAL ENGINEERING

Question No.1 Marks: 1.00

Bookmark

The current flowing in to a balanced delta connected load through line 'a' is 10 A when the conductor of line 'b' is open. With the current in line 'a' as reference, compute the symmetrical components of the line currents. Assume the phase sequence of 'abc'.

(A) ○ $I_{a0} = 10 \ \text{A}$
$I_{a1} = (-1.66 + j2.88) \ \text{A}$
$I_{a2} = (1.66 - j2.88) \ \text{A}$

(B) ○ $I_{a0} = 10 \ \text{A}$
$I_{a1} = (-5 + j2.88) \ \text{A}$
$I_{a2} = (5 - j2.88) \ \text{A}$

(C) ○ $I_{a0} = 0 \ \text{A}$
$I_{a1} = (5 + j2.88) \ \text{A}$
$I_{a2} = (5 - j2.88) \ \text{A}$ **(Correct Answer)**

(D) ○ $I_{a0} = 0 \ \text{A}$
$I_{a1} = (-1.66 + j2.88) \ \text{A}$
$I_{a2} = (1.66 - j2.88) \ \text{A}$

Question No.2 Marks: 1.00

Bookmark

Two-wattmeter method is used to measure the power taken by a 3-phase induction motor on no load. The wattmeter readings are 400 W and −50 W. Calculate the reactive power taken by the load.

(A) ○ $350\sqrt{3} \ VAR$

(B) ○ $450\sqrt{3} \ VAR$ **(Correct Answer)**

(C) ○ $\frac{450}{\sqrt{3}} \ VAR$

(D) ○ $\frac{350}{\sqrt{3}} \ VAR$

Question No.3 Marks: 1.00

Bookmark

In a series RLC circuit, the supply voltage is 230 V at 50 Hz. The resonant current is 2 A at the resonant frequency of 50 Hz. Under the resonant condition, the voltage across the capacitor is measured to be equal to 460 V. What are the values of L and C?

(A) ○ 0.73 mH and 13.85 μF

(B) ○ 0.53 H and 15.83 μF
(C) ○ 0.53 mH and 15.83 μF
(D) ○ **0.73 H and 13.85 μF (Correct Answer)**

Question No.4 Marks: 1.00
Bookmark

Which among these components connects to physical equipments of the distribution system?
(A) ○ Central control room with host computers
(B) ○ **Remote Terminal Unit (Correct Answer)**
(C) ○ Communication infrastructure
(D) ○ None of the above

Question No.5 Marks: 1.00
Bookmark

A 10 A, Type C Miniature Circuit Breaker (MCB) will trip at fault currents
(A) ○ **between 50 A and 100 A (Correct Answer)**
(B) ○ less than 10 A
(C) ○ greater than 100 A
(D) ○ between 10 A and 50 A

Question No.6 Marks: 1.00
Bookmark

The sending end and receiving end voltages of the short transmission line are 150 KV and 120 KV respectively. Calculate its percentage voltage regulation.
(A) ○ 40%
(B) ○ 30%
(C) ○ 20%
(D) ○ **25% (Correct Answer)**

Question No.7 Marks: 1.00
Bookmark

If a cable of homogeneous insulation has maximum stress of 6 kV/mm, then the dielectric strength of insulation should be .....
(A) ○ 12 kV/mm
(B) ○ **6 kV/mm (Correct Answer)**
(C) ○ 3 kV/mm
(D) ○ 1.5 kV/mm

Question No.8 Marks: 1.00
Bookmark

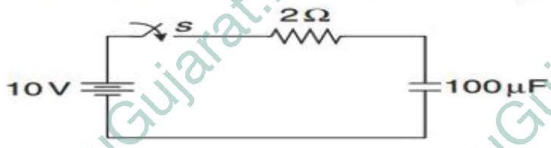
In two-part tariff, the ..... charges depend upon the maximum demand of the consumer and the ..... charges depend upon the number of units consumed by the consumer.
(A) ○ semi-fixed, running
(B) ○ **fixed, running (Correct Answer)**
(C) ○ fixed, semi-fixed
(D) ○ running, fixed

Question No.9 Marks: 1.00
Bookmark

The magnetizing inrush current in a transformer is rich in the ..... harmonic component.
(A) ○ **second (Correct Answer)**
(B) ○ seventh
(C) ○ third
(D) ○ fifth

Question No.10 Marks: 1.00
Bookmark

Find the current through the resistor and the capacitor for the circuit shown in Fig. The switch is closed at t = 0 and initial change in the capacitor is zero.



(A) ○ $i(t)=10e^{-5000t}\ A$

(B) ○ $i(t)=5(1-e^{-5000t})A$

(C) ○ $i(t)=10(1-e^{-5000t})\ A$

(D) ○ $i(t)=5e^{-5000t}\ A$ **(Correct Answer)**

Question No.11 Marks: 1.00

Bookmark

The miniature circuit breaker (MCB) with ..... trip characteristics trips instantaneously when the current flowing through it reaches between 10 to 20 times the rated current.

(A) ○ **Class D (Correct Answer)**

(B) ○ Class B

(C) ○ Class Z

(D) ○ Class C

Question No.12 Marks: 1.00

Bookmark

A single phase motor connected to 400 V, 50 Hz supply takes 25 A at a power factor of 0.75 lagging. Calculate the capacitance required in parallel with the motor to raise the power factor to 0.95 lagging.

(A) ○ 62.55 μF

(B) ○ **82.55 μF (Correct Answer)**

(C) ○ 72.55 μF

(D) ○ 92.55 μF

Question No.13 Marks: 1.00

Bookmark

The threshold voltage of an N-channel enhancement mode MOSFET is 0.5 V. When the device is biased at a gate voltage of 3 V, pinch-off would occur at a drain voltage of

(A) ○ 4.5 V

(B) ○ **2.5 V (Correct Answer)**

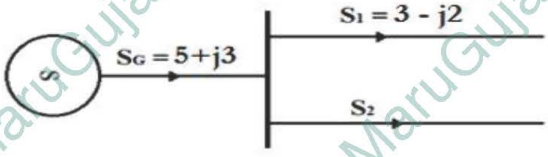
(C) ○ 1.5 V

(D) ○ 3.5 V

Question No.14 Marks: 1.00

Bookmark

The complex power injections at a bus are shown in Fig. Two lines are connected drawing the powers as shown in Fig. The complex power in the line-2 'S_2' is



(A) ○ **2+j5 (Correct Answer)**

(B) ○ 2-j5

(C) ○ 2-j1

(D) ○ 2+j1

Question No.15 Marks: 1.00

Bookmark

Thermopile is used for the measurement of

(A) ○ emf

(B) ○ flow rate

(C) ○ **temperature (Correct Answer)**

(D) ○ current

Question No.16 Marks: 1.00

Bookmark

..... is the rms value of AC component of the current in the pole at the instant of contact separation.

(A) ○ Asymmetrical breaking current

(B) ○ **Symmetrical breaking current (Correct Answer)**

(C) ○ Making current

(D) ○ Symmetrical short circuit current

Question No.17 Marks: 1.00

Bookmark

The short circuit current of a solar cell is

(A) ○ **directly proportional to radiation intensity (Correct Answer)**

(B) ○ changes logarithmically with radiation

(C) ○ constant and not affected by radiation

(D) ○ inversely proportional to radiation intensity

Question No.18 Marks: 1.00

Bookmark

What are the main challenges that the electric grid faces?

(A) ○ Increase in Energy Demand

(B) ○ Reliability and Power Quality is Declining

(C) ○ Global rise in temperature

(D) ○ **All of the above (Correct Answer)**

Question No.19 Marks: 1.00

Bookmark

The current in the coil of a large electromagnet falls from 6 A to 2 A in 10 ms. The induced emf across the coil is 100 V. Find the self-inductance of the coil.

(A) ○ **0.25 H (Correct Answer)**

(B) ○ 0.5 H

(C) ○ 0.75 H

(D) ○ 1.25 H

Question No.20 Marks: 1.00

Bookmark

Consider a solar PV plant with the following specific conditions:
Analysis period: 1 year
Measured average solar irradiation intensity in 1 year: 150 kWh/m^2
Generator area of the PV plant: 10 m^2
Efficiency factor of the PV modules: 15%
Electrical energy actually exported by plant to grid: 135 kWh
Calculate the performance ratio.

(A) ○ 80%

(B) ○ 75%

(C) ○ **60% (Correct Answer)**

(D) ○ 50%

Question No.21 Marks: 1.00

Bookmark

If the velocity of wind is doubled then the power output will

(A) ○ increase by 6 times

(B) ○ **increase by 8 times (Correct Answer)**
(C) ○ doubled
(D) ○ reduced to half

Question No.22 Marks: 1.00
Bookmark

A DC shunt generator has an induced voltage of 220 V on open circuit. When the machine is on load the terminal voltage is 200 V. Find the load current if the field resistance is 100 Ω and armature resistance is 0.2 Ω.
(A) ○ **98 A (Correct Answer)**
(B) ○ 102 A
(C) ○ 104 A
(D) ○ 96 A

Question No.23 Marks: 1.00
Bookmark

The DC offset in fault current causes conventional over-current (OC) relays to :
(A) ○ under-reach
(B) ○ **over-reach (Correct Answer)**
(C) ○ reach remains unaffected due to DC offset
(D) ○ sometimes under-reach and sometimes over-reach

Question No.24 Marks: 1.00
Bookmark

What is the value of the characteristic impedance of a transmission line with impedance and admittance of 15 and 5?
(A) ○ 0.707
(B) ○ **1.732 (Correct Answer)**
(C) ○ 0.577
(D) ○ 1.414

Question No.25 Marks: 1.00
Bookmark

The maximum value of power factor is ..... and it exists in a pure ..... circuit.
(A) ○ 1, inductive
(B) ○ 0.866, resistive
(C) ○ **1, resistive (Correct Answer)**
(D) ○ 0.866, inductive

Question No.26 Marks: 1.00
Bookmark

Murray loop test is performed on a faulty cable 300 m long. At balance, the resistance connected to the faulty core was set at 20 Ω and the resistance of the resistor connected to the sound core was 40 Ω. Calculate the distance of the fault point from the test end.
(A) ○ 400 m
(B) ○ 100 m
(C) ○ **200 m (Correct Answer)**
(D) ○ 300 m

Question No.27 Marks: 1.00
Bookmark

In a power network, 375 kV is recorded at a 400 kV bus. A 45 MVAR, 400 kV shunt reactor is connected to the bus. What is the reactive power absorbed by the shunt reactor?
(A) ○ **39.55 MVAR (Correct Answer)**
(B) ○ 49.55 MVAR
(C) ○ 59.55 MVAR
(D) ○ 69.55 MVAR

Question No.28 Marks: 1.00

Bookmark

A three phase four pole 50 Hz induction motor has a rotor resistance of 0.02 Ω/phase and stand-still reactance of 0.5 Ω/phase. Calculate the speed at which the maximum torque is developed.

(A) ○ **1440 rpm (Correct Answer)**
(B) ○ 1500 rpm
(C) ○ 1475 rpm
(D) ○ 1525 rpm

Question No.29 Marks: 1.00

Bookmark

The sites where the capacity factor is ..... are not considered suitable for wind power generation.

(A) ○ **lesser than 12 % (Correct Answer)**
(B) ○ greater than 24%
(C) ○ greater than 12%
(D) ○ lesser than 24 %

Question No.30 Marks: 1.00

Bookmark

A 1000 kVA ONAN cooled transformer has a load of 500 kVA throughout the day except for a period of 2 hours. What is the permissible overload for a duration of two hours. Assume the permissible load kVA as a fraction of rated kVA is 1.43.

(A) ○ 700 kVA
(B) ○ 1050 kVA
(C) ○ 715 kVA
(D) ○ **1430 kVA (Correct Answer)**

Question No.31 Marks: 1.00

Bookmark

In a 3-phase, 4-wire, 400/230 V system, a lamp (L_1) of 100 W is connected to one phase and neutral and a lamp (L_2) of 150 W is connected to the second pahse and neutral. If the neutral wire is disconnected accidently, what will be the voltage across a 150 W lamp (L_2)?

(A) ○ 240 V
(B) ○ 120 V
(C) ○ 180 V
(D) ○ **160 V (Correct Answer)**

Question No.32 Marks: 1.00

Bookmark

A rectangular conductor is 1.6 inches wide and 0.25 inch thick. What is its area in square mils?

(A) ○ **400000 square mils (Correct Answer)**
(B) ○ 40000 square mils
(C) ○ 4000 square mils
(D) ○ 400 square mils

Question No.33 Marks: 1.00

Bookmark

Which state is the largest producer of wind energy in India?

(A) ○ **Tamil Nadu (Correct Answer)**
(B) ○ Andhra Pradesh
(C) ○ Madhya Pradesh
(D) ○ Maharashtra

Question No.34 Marks: 1.00

Bookmark

The most commonly used method for the protection of three phase feeder is

(A) ○ Time graded protection

(B) ○ **Differential protection (Correct Answer)**
(C) ○ Reverse power protection
(D) ○ None of the above

Question No.35 Marks: 1.00
Bookmark

In transformers,
Statement 1: Deterioration of oil may occur due to the result of prolonged overloading of the transformer.
Statement 2: Dielectric faults occur in the winding due to turn-to-turn insulation breakdown.

(A) ○ **Both Statement 1 and Statement 2 are TRUE (Correct Answer)**
(B) ○ Statement 1 is FALSE and Statement 2 is TRUE
(C) ○ Statement 1 is TRUE and Statement 2 is FALSE
(D) ○ Both Statement 1 and Statement 2 are FALSE

Question No.36 Marks: 1.00
Bookmark

In transformer testing, Sweep Frequency Response Analysis (SFRA) testing is a tool to help locate .....

(A) ○ Core movement
(B) ○ Winding damage
(C) ○ Short circuits
(D) ○ **All of the above (Correct Answer)**

Question No.37 Marks: 1.00
Bookmark

A conductor having surface density is embedded in a dielectric medium of permittivity. The electric field in the medium is E. If it is known that the pressure p on the conductor surface is equal to the electric energy density in the medium, then p (in SI unit)is given by

(A) ○ $\frac{\sigma^2}{2\pi\varepsilon}$
(B) ○ $\frac{\sigma^2}{2\varepsilon}$ **(Correct Answer)**
(C) ○ $\frac{\sigma^2}{4\varepsilon}$
(D) ○ $\frac{\sigma}{4\pi\varepsilon}$

Question No.38 Marks: 1.00
Bookmark

A star connected synchronous generator rated at 500 MVA, 50 kV has a reactance of 0.5 pu. Find the ohmic value of the reactance.

(A) ○ 1 Ω
(B) ○ **2.5 Ω (Correct Answer)**
(C) ○ 0.1 Ω
(D) ○ 0.25 Ω

Question No.39 Marks: 1.00
Bookmark

Which country leads in the production of biofuel in the world?

(A) ○ Germany
(B) ○ **United States of America (Correct Answer)**
(C) ○ Brazil
(D) ○ Argentina

Question No.40 Marks: 1.00

Bookmark

A delta-connected balanced three-phase load is supplied from a three-phase, 400 V supply. The line current is 20 A and the power taken by the load is 10 kW. Find the power consumed if the same load is connected in star.

(A) ○ **3.33 kW (Correct Answer)**
(B) ○ 16.66 kW
(C) ○ 30 kW
(D) ○ 21.77 kW

Question No.41 Marks: 1.00

Bookmark

A 10-pole induction motor is supplied by a 6-pole alternator, which is driven at 1400 rpm. If the motor runs with a slip of 5%, what is its speed?

(A) ○ 1425 rpm
(B) ○ 1575 rpm
(C) ○ 882 rpm
(D) ○ **798 rpm (Correct Answer)**

Question No.42 Marks: 1.00

Bookmark

If the phase velocity of a plane wave in a perfect dielectric is 0.4 times its value in free space, then what is the relative permittivity of the dielectric?

(A) ○ 2.5
(B) ○ 4.25
(C) ○ **6.25 (Correct Answer)**
(D) ○ 1.25

Question No.43 Marks: 1.00

Bookmark

The purpose of ..... is to check the ability of the circuit breaker to withstand the overvoltages at power frequency as well as undesired value of voltage during lightning and other discharge phenomenon.

(A) ○ synthetic test
(B) ○ **dielectric test (Correct Answer)**
(C) ○ routine test
(D) ○ short circuit test

Question No.44 Marks: 1.00

Bookmark

A 3 μF capacitor is charged by a constant current of 2 μA for six seconds. The voltage across the capacitor at the end of charging will be

(A) ○ **4 V (Correct Answer)**
(B) ○ 2 V
(C) ○ 6 V
(D) ○ 8 V

Question No.45 Marks: 1.00

Bookmark

Which of the following statements are correct?
(i) Advanced metering infrastructure (AMI) is typically more automated and allows real-time, on-demand interrogations with metering endpoints.
(ii) An Automated Meter Reading (AMR) device only communicates from the customer to the energy supplier.
(iii) AMR meters only provide kWh information and possible peak kW demand for the month.

(A) ○ **(i), (ii) and (iii) (Correct Answer)**
(B) ○ (i) and (ii) only
(C) ○ (i) and (iii) only
(D) ○ (ii) and (iii) only

Question No.46 Marks: 1.00

Bookmark

A 200/400 V, 20 kVA, 2-winding transformer is connected as an auto-transformer to transform 600 V to 200 V. Calculate the kVA rating of the auto-transformer.

(A) ○ **30 kVA (Correct Answer)**
(B) ○ 25 kVA
(C) ○ 60 kVA
(D) ○ 50 kVA

Question No.47 Marks: 1.00

Bookmark

Continuous and rapid variations in the load current magnitude which causes voltage variations is known as

(A) ○ **Flicker (Correct Answer)**
(B) ○ Voltage distortion
(C) ○ Harmonics
(D) ○ Voltage sag

Question No.48 Marks: 1.00

Bookmark

Consider the following statements and choose the correct option.
Statement 1: DVR (Dynamic Voltage Restorer) is a series compensation device.
Statement 2: DVR protects sensitive electric load from power quality problems such as voltage sags, swells, unbalance and distortion through power electronic controllers."

(A) ○ Statement 1 is TRUE and Statement 2 is FALSE
(B) ○ Both Statement 1 and Statement 2 are FALSE
(C) ○ **Both Statement 1 and Statement 2 are TRUE (Correct Answer)**
(D) ○ Statement 1 is FALSE and Statement 2 is TRUE

Question No.49 Marks: 1.00

Bookmark

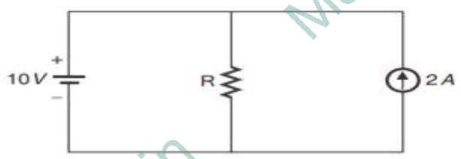
What items should be considered when looking at a site for a new transformer installation?

(A) ○ Environmental impact
(B) ○ Soils Report
(C) ○ Site Survey
(D) ○ **All of the above (Correct Answer)**

Question No.50 Marks: 1.00

Bookmark

If the power supplied by the current source shown in Fig. is double of that supplied by the voltage source, then the value of 'R' is



(A) ○ 5 Ω
(B) ○ **3.33 Ω (Correct Answer)**
(C) ○ 7.5 Ω
(D) ○ 2.5 Ω

Question No.51 Marks: 1.00

Bookmark

A single phase full converter bridge, connected to 230 V, 50 Hz source is feeding a load R =10 Ω in series with a large inductance that makes the load current ripple free. For a firing angle of 450, calculate the rectification efficiency.

(A) ○ 50.55%
○

(B) **63.66% (Correct Answer)**
(C) ○ 28.33%
(D) ○ 76.66%

Question No.52 Marks: 1.00
Bookmark

Consider the following statements associated with Buchholz's relays.
Statement 1: Buchholz's relay is used for protection of a transformer against incipient faults.
Statement 2: Buchholz's relay can be installed on oil cooled transformers.

(A) ○ Both Statement 1 and Statement 2 are FALSE
(B) ○ Statement 1 is TRUE and Statement 2 is FALSE
(C) ○ **Both Statement 1 and Statement 2 are TRUE (Correct Answer)**
(D) ○ Statement 1 is FALSE and Statement 2 is TRUE

Question No.53 Marks: 1.00
Bookmark

In which of the following situations, there is no need to provide directional overcurrent protection.

(A) ○ ring main
(B) ○ double end fed, single feeder
(C) ○ single end fed, parallel feeder
(D) ○ **single end fed, single feeder (Correct Answer)**

Question No.54 Marks: 1.00
Bookmark

What is the value of capacitance of a capacitor which has a voltage of 4V and has 16C of charge?

(A) ○ **4F (Correct Answer)**
(B) ○ 2F
(C) ○ 8F
(D) ○ 16F

Question No.55 Marks: 1.00
Bookmark

Medium voltage covered conductors (MVCC) are produced in voltage rating

(A) ○ beyond 200 kV
(B) ○ **between 6.6 kV to 33 kV (Correct Answer)**
(C) ○ between 132 kV to 200 kV
(D) ○ less than 3.3 kV

Question No.56 Marks: 1.00
Bookmark

Match the following:

Buses	Unknown Values
A. Slack bus	(i) V, δ
B. Generator bus	(ii) P, Q
C. Load bus	(iii) Q, δ

(A) ○ **A = (ii), B = (iii), C = (i) (Correct Answer)**
(B) ○ A = (iii), B = (ii), C = (i)
(C) ○ A = (iii), B = (i), C = (ii)
(D) ○ A = (ii), B = (i), C = (iii)

Question No.57 Marks: 1.00
Bookmark

Determine the ohmic value of the current limiting reactor per phase external to a 40 MVA, 15 kV, 50 Hz, three phase synchronous generator which can limit the current on short circuit of 6 times the full load current. The reactance of the synchronous generator is 0.06 pu.

(A) ○ 0.8 Ω
(B) ○ 0.2 Ω
(C) ○ 0.4 Ω
(D) ○ **0.6 Ω (Correct Answer)**

Question No.58 Marks: 1.00
Bookmark

A 50 Hz synchronous generator is connected to an infinite bus through a line. The p.u. reactances of generator and the line are j0.4 p.u. and j0.2 p.u. respectively. The generator no load voltage is 1.1 p.u. and that of infinite bus is 1.0 p.u. The inertia constant of the generator is 4 MW-sec/MVA. Determine the frequency of natural oscillations if the generator is loaded to 60% of its maximum power transfer capacity and small perturbation in power is given.

(A) ○ 1.8 Hz
(B) ○ **1.2 Hz (Correct Answer)**
(C) ○ 0.8 Hz
(D) ○ 1.6 Hz

Question No.59 Marks: 1.00
Bookmark

In a single phase energy meter, the pressure / voltage coil is wound on

(A) ○ the edges of the limb on the laminated core
(B) ○ both the limbs of the laminated core with same turns
(C) ○ both the limbs of the laminated core with different turns
(D) ○ **the centre limb of the laminated core / the middle limb of the shunt magnet (Correct Answer)**

Question No.60 Marks: 1.00
Bookmark

Consider the following statements and choose the correct option.
Statement 1: The speed regulation of a synchronous motor is always unity.
Statement 2: In a synchronous motor, at no-load condition, and with normal excitation the armature current drawn by a synchronous motor is in phase with applied voltage.

(A) ○ Statement 1 is FALSE and Statement 2 is TRUE
(B) ○ **Both Statement 1 and Statement 2 are FALSE (Correct Answer)**
(C) ○ Statement 1 is TRUE and Statement 2 is FALSE
(D) ○ Both Statement 1 and Statement 2 are TRUE

COMPUTER KNOWLEDGE - COMPUTER KNOWLEDGE

Question No.1 Marks: 1.00
Bookmark

Data Encryption Standard (DES) was designed by

(A) ○ Microsoft
(B) ○ Apple
(C) ○ **IBM (Correct Answer)**
(D) ○ None of the above

Question No.2 Marks: 1.00
Bookmark

A group of computers and other devices connected together is called a network and the concept of connected computers sharing resources is called _____

(A) ○ Switching
(B) ○ Routing
(C) ○ **Networking (Correct Answer)**
(D) ○ Linking

Question No.3 Marks: 1.00
Bookmark

Which of the following medium is used between CPU and RAM to speed up the processing power of a CPU?

(A) ○ Flash memory
(B) ○ **Cache memory (Correct Answer)**
(C) ○ Virtual memory
(D) ○ DRAM

Question No.4 Marks: 1.00
Bookmark

Which is the function of Operating System?
(A) ○ Process Management
(B) ○ Device Management
(C) ○ Security
(D) ○ **All the above (Correct Answer)**

Question No.5 Marks: 1.00
Bookmark

Transistors were used in
(A) ○ **Second Generation Computers (Correct Answer)**
(B) ○ First Generation Computers
(C) ○ Third Generation Computers
(D) ○ Fourth Generation Computers

Question No.6 Marks: 1.00
Bookmark

Which feature is used in Ms Word to make the selected sentence to All Capital Letters or All Small Letters?
(A) ○ **Change case (Correct Answer)**
(B) ○ Change capital
(C) ○ Change letter
(D) ○ Change sentence

Question No.7 Marks: 1.00
Bookmark

Job, in operating system refers to
(A) ○ System Software
(B) ○ **Process (Correct Answer)**
(C) ○ Application Software
(D) ○ Program

Question No.8 Marks: 1.00
Bookmark

The _____ elements are specialized computers used to connect two or more transmission lines.
(A) ○ **Switching (Correct Answer)**
(B) ○ Networking
(C) ○ Broadcasting
(D) ○ Transfering

Question No.9 Marks: 1.00
Bookmark

Message _____ means that the data must arrive at the receiver exactly as sent.
(A) ○ Confidentiality
(B) ○ **Integrity (Correct Answer)**
(C) ○ Authentication
(D) ○ None ot these

Question No.10 Marks: 1.00
Bookmark

Name the application under MS Office software bundle, that we use to create audio-visual presentation.
(A) ○ MS Access

(B) ○ MS Word
(C) ○ **MS Powerpoint (Correct Answer)**
(D) ○ MS Excel

GUJARATI LANGUAGE AND GRAMMAR - GUJARATI LANGUAGE AND GRAMMAR

Question No.1 Marks: 1.00
Bookmark

મેં મીઠાઈ બનાવી.' વાક્યને કેવળ ક્રિયાપદની પ્રેરક રચના કઈ છે?
(A) ○ હું મીઠાઈ બનાવવા લાગી
(B) ○ મેં જ મીઠાઈ બનાવી લીધી.
(C) ○ **મેં મીઠાઈ બનાવડાવી. (Correct Answer)**
(D) ○ મીઠાઈ તો હું જ બનાવું ને!

Question No.2 Marks: 1.00
Bookmark

1.મોટેભાગે 'જાણે' શબ્દ હોય ત્યારે, ઉત્પ્રેક્ષા અલંકાર બને છે.
2. જ્યારે ઉપમેય અને ઉપમાન એક જ હોય ત્યારે ઉપમા અલંકાર બને.
3. સરખાવવામાં આવેલ બે શબ્દોની વચ્ચે જ્યારે 'જેવો', 'જેવી' જેવા શબ્દો આવે ત્યારે રૂપક અલંકાર બને.
4. જ્યારે ટીકા કે નિંદા કે વ્યંગના રૂપે પ્રશંસા કરાય ત્યારે અતિશયોક્તિ અલંકાર બને.

ઉપરોક્ત વિધાનોમાંથી કયું/ ક્યા વિધાનો સાચા છે.
(A) ○ માત્ર 4
(B) ○ 1, 3
(C) ○ **માત્ર 1 (Correct Answer)**
(D) ○ 2,4

Question No.3 Marks: 1.00
Bookmark

દ્રશ્ય' શબ્દનો વિરુદ્ધાર્થી શબ્દ આપેલ વિકલ્પોમાંથી ક્યો છે?
(A) ○ દ્રશ્યમાન
(B) ○ **અદ્રશ્ય (Correct Answer)**
(C) ○ દ્રષ્ટી
(D) ○ દ્રષ્ટીવંત

Question No.4 Marks: 1.00
Bookmark

નીચે પૈકી કેટલી કહેવતો વિરુદ્ધાર્થી છે?
1. પંચ બોલે તે પરમેશ્વર - ગામને મોઢે ગળણું ન બંધાય
2. ચોરની ચાર અને જોનારાની બે - વિશ્વાસે વહાણ ચાલે
3. ખાલી ચણો વાગે ગણો- અધૂરો ઘડો છલકાય
4. હાથનાં કર્યાં હૈયે વાગ્યા - દીવો લઈને કૂવામાં પડવું
(A) ○ એક પણ નહીં
(B) ○ કુલ 3
(C) ○ બધી કહેવતો સમાનાર્થી છે.
(D) ○ **કુલ 1 (Correct Answer)**

Question No.5 Marks: 1.00
Bookmark

સાબરમતી: અમદાવાદ :: મૂસી:
(A) ○ ગોવા
(B) ○ **હૈદરાબાદ (Correct Answer)**
(C) ○ લંડન
(D) ○ વેનિસ

Question No.6 Marks: 1.00
Bookmark

'હું નહિ આવી શકું' વાક્યને સ્થળવાચક ક્રિયાવિશેષણમાં ફેરવો.

(A) ○ હું આજે નહિ આવી શકું..
(B) ○ હું કદી પણ નહિ આવી શકું.
(C) ○ હું નિયમિત રીતે નહિ આવી શકું.
(D) ○ **હું ચેન્નઈ નહિ આવી શકું. (Correct Answer)**

Question No.7 Marks: 1.00
Bookmark

'કામકાજમાં ધ્યાન કેન્દ્રિત કરજો'
આ આજ્ઞાર્થ વાક્યની સંભાવનાર્થ વાક્યરચના કઈ હોઈ શકે ?
(A) ○ **હવે તો કામકાજમાં ધ્યાન કેન્દ્રિત કરશો ને? (Correct Answer)**
(B) ○ કામકાજમાં ધ્યાન કેન્દ્રિત કરી લીધું છે.
(C) ○ હવે તો તમે કામકાજમાં ધ્યાન કેન્દ્રિત કરો.
(D) ○ કામકાજમાં ધ્યાન કેન્દ્રિત નથી કરવું?

Question No.8 Marks: 1.00
Bookmark

સારું: નરસું :: શુક્લ: ?
(A) ○ અમર
(B) ○ અવિનાશી
(C) ○ **કૃષ્ણ (Correct Answer)**
(D) ○ પરમ

Question No.9 Marks: 1.00
Bookmark

નીચે પૈકી'ઓસડ' નો સમાનાર્થી શબ્દ ક્યો છે?
(A) ○ અચર
(B) ○ **ઔષધ (Correct Answer)**
(C) ○ વૃંદા
(D) ○ અનરવું

Question No.10 Marks: 1.00
Bookmark

'વિષમ' ની સંધિ છૂટી પાડો. -ક્યો વિકલ્પ સાચો છે?
(A) ○ **વિ + સમ (Correct Answer)**
(B) ○ વી + સમ
(C) ○ વીસ + અમ
(D) ○ વિસ્ + અમ

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