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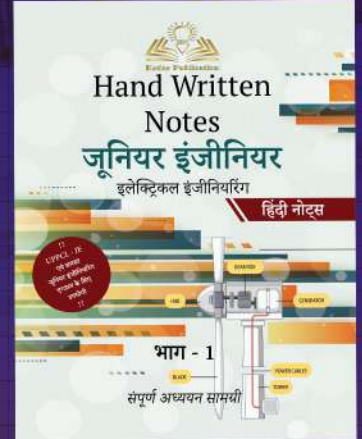
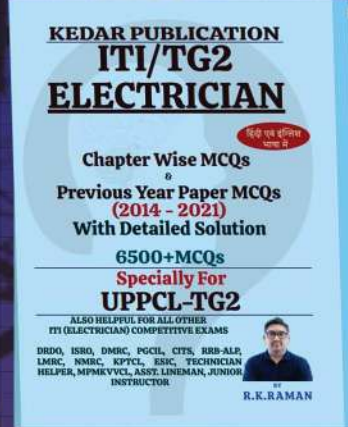
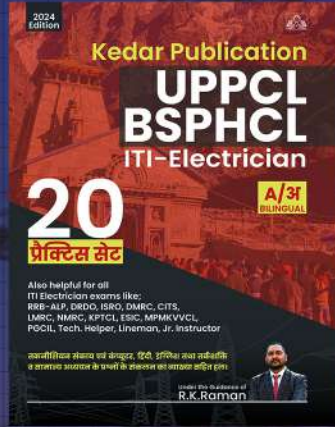
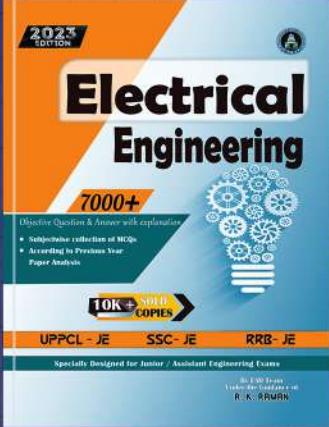
## Objective Book for

Electrical-JE

UPPCL BSPHCL

ITI-Electrician

JE Short Notes



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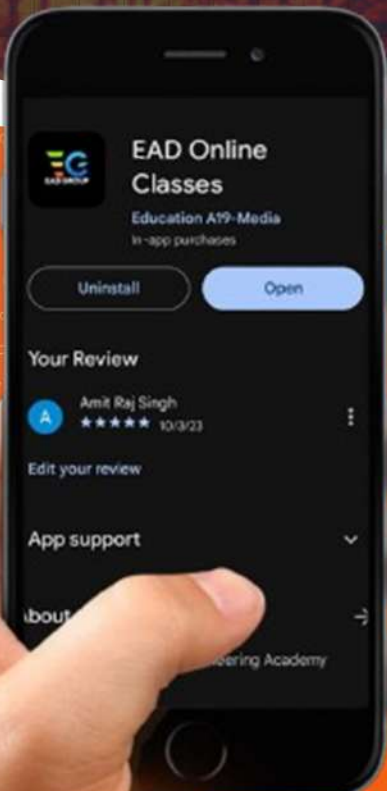
Exam Targeted:-

UPPCL-JE, SSC-JE RRB-JE

PGCIL-DT,DFCCIL-JE, ITI Etc.



Raman sir  
Electrical Engg. Expert



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Exam Date: 05-Jan-2022

Exam Time: 16:00-18:00

Post Name: Vidyut Sahayak Junior Engineer -  
Electrical

## General Knowledge - General Knowledge

## Question No.1

Marks: 1.00

Bookmark 

What is the full form of "ASEAN"?

- (A)  **ASSOCIATION OF SOUTH EAST ASIAN NATIONS (Correct Answer)**
- (B)  ASSOCIATION OF SOUTH EAST ATLANTIC NATIONS
- (C)  ASSOCIATION OF SOUTH EAST AFRICAN NATIONS
- (D)  ASSOCIATION OF SOUTH EAST AMERICAN NATIONS

## Question No.2

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What is the process of heat transfer in solids known as?

- (A)  Radiation
- (B)  **Conduction (Correct Answer)**
- (C)  Convection
- (D)  Insulation

## Question No.3

Marks: 1.00

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Which among the following Acts was regarded as Montagu-Chelmsford Reforms?

- (A)  Indian Council Act,1892
- (B)  **Government of India Act, 1919 (Correct Answer)**
- (C)  Government of India Act, 1935
- (D)  Indian Council Act,1861

## Question No.4

Marks: 1.00

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What is the expansion of LTE in communication technology?

- (A)  Latest Technology Evolution
- (B)  Long Technology Evolution
- (C)  Latest Technology Enrichment
- (D)  **Long Term Evolution (Correct Answer)**

## Question No.5

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Which of the following States experience Continental climate?

- (A)  Odisha
- (B)  West Bengal
- (C)  Kerala
- (D)  **Haryana (Correct Answer)**

## Question No.6

Marks: 1.00

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When the first Municipal Corporation of India was established?

- (A)  **1688 (Correct Answer)**
- (B)  1988
- (C)  1998

(D)  1788

**Question No.7**

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In which year was the Fiscal Responsibility and Budget Management Act formulated?

- (A)  2005  
(B)  **2003 (Correct Answer)**  
(C)  2009  
(D)  2007

**Question No.8**

Marks: 1.00

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Which among the following African countries has celebrated its 60th Independence Day on 01st Oct, 2020?

- (A)  **Nigeria (Correct Answer)**  
(B)  South Africa  
(C)  Zimbabwe  
(D)  Egypt

**Question No.9**

Marks: 1.00

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Who captivated the Gudem rebels of Andhra Pradesh claiming that he had special powers and could survive bullet shots too?

- (A)  Sarojini Naidu  
(B)  Kalluri Chandramouli  
(C)  **Alluri Sitaram Raju (Correct Answer)**  
(D)  Gottipati Brahmaiah

**Question No.10**

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Who founded the Tattvabodhini Sabha in 1839?

- (A)  Rabindranath Tagore  
(B)  **Debendranath Tagore (Correct Answer)**  
(C)  Surendranath Tagore  
(D)  Abindranath Tagore

**English Knowledge - English Knowledge**

**Question No.1**

Marks: 1.00

Bookmark

From the given alternatives, choose the one that best expresses the meaning of the given idiom/phrase.  
Over and above.

- (A)  Partner of someone  
(B)  From a different point of view  
(C)  **In addition to (Correct Answer)**  
(D)  With absolute certainty

**Question No.2**

Marks: 1.00

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Fill in the blanks with suitable Article from the given alternatives.  
Jane gave \_\_\_\_\_ extraordinary performance in the singing competition.

- (A)  **an (Correct Answer)**  
(B)  a  
(C)  the  
(D)  No article

**Question No.3**

Marks: 1.00

Bookmark

Choose the word which best expresses the similar meaning of the given word " CONFRONT ".

- (A) Yield
- (B)  Challenge (Correct Answer)
- (C)  Avoid
- (D)  Dodge

**Question No.4**

Marks: 1.00

Bookmark

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

One who journeys from place to place

- (A)  Polygamy
- (B)  Itinerant (Correct Answer)
- (C)  Amphibian
- (D)  Teetotaller

**Question No.5**

Marks: 1.00

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

Vijay was just going to the walk \_\_\_\_\_ the street.

- (A)  beneath
- (B)  to
- (C)  across (Correct Answer)
- (D)  since

**Question No.6**

Marks: 1.00

Bookmark

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

- (A)  Eroneous
- (B)  Gradiant
- (C)  Fragmented
- (D)  Exhaustive (Correct Answer)

**Question No.7**

Marks: 1.00

Bookmark

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

A person who looks at the darker side of things

- (A)  Optimist
- (B)  Pessimist (Correct Answer)
- (C)  Somnambulist
- (D)  Amnesia

**Question No.8**

Marks: 1.00

Bookmark

Choose the word which expresses nearly the **opposite** meaning of the given word " DEFAMATION " .

- (A)  Lie
- (B)  Detraction
- (C)  slam
- (D)  Approval (Correct Answer)

**Question No.9**

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 economic problem of farmers on Africa are a dismal one which has caused many of them to lose their livelihood.

- (A)  of farmers in Africa are a dismal one which have
- (B)  of farmers in Africa is a dismal one which has (Correct Answer)
- (C)  to farmers in Africa is a dismal one what has
- (D)  The given sentence is correct

## Question No.10

Marks: 1.00

Bookmark 

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

- (A)  Advantage  
 (B)  Permanent  
 (C)  **Acting (Correct Answer)**  
 (D)  Continual

## Electrical Engineering - Electrical Engineering

## Question No.1

Marks: 1.00

Bookmark 

What is the recommended width of right of way (ROW) for the transmission line of 132 kV?

- (A)  52 meters  
 (B)  18 meters  
 (C)  35 meters  
 (D)  **27 meters (Correct Answer)**

## Question No.2

Marks: 1.00

Bookmark 

Which type of tower is NOT called Tension tower/section tower?

- (A)  Type D  
 (B)  **Type A (Correct Answer)**  
 (C)  Type B  
 (D)  Type C

## Question No.3

Marks: 1.00

Bookmark 

..... type of gas insulated substation (GIS) requires larger bay width and space as compared to other gas insulated switchgear system.

- (A)  **Isolated Phase GIS (Correct Answer)**  
 (B)  Highly Integrated Systems  
 (C)  Compact GIS  
 (D)  Hybrid GIS

## Question No.4

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Two condensers of capacities  $3C$  and  $C$  are joined in parallel and charged upto potential  $V$ . The battery is removed and the condenser of capacity  $C$  is filled completely with a medium of dielectric constant  $K$ . The potential difference across the capacitors will be

- (A)   $\frac{V}{4K}$   
 (B)   $\frac{V}{K+2}$   
 (C)   $\frac{4V}{K+3}$  (Correct Answer)  
 (D)   $\frac{4V}{K}$

## Question No.5

Marks: 1.00

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..... is comprised of a parallel resonant circuit with high impedance tuned to the power line carrier frequency.

- (A)  Carrier transmitter  
 (B)  Line tuner

- (C)  Power amplifier  
(D)  **Line trap (Correct Answer)**

**Question No.6**

Marks: 1.00

Bookmark

The meter constant of an energy meter is 1000 rev/kWh, the disc makes 2000 revolutions in a given time. The energy consumed is

- (A)  3 kWh  
(B)  1 kWh  
(C)  4 kWh  
(D)  **2 kWh (Correct Answer)**

**Question No.7**

Marks: 1.00

Bookmark

The optical voltage transformer (OVT) measures the electric voltage by means of .....

- (A)  Peltier effect  
(B)  Faraday effect  
(C)  Seebeck effect  
(D)  **Pockels effect (Correct Answer)**

**Question No.8**

Marks: 1.00

Bookmark

If a 6 m diameter wind turbine rotor has 24 blades, each 0.5 m wide, calculate its solidity.

- (A)  83.60%  
(B)  53.60%  
(C)  73.60%  
(D)  **63.60% (Correct Answer)**

**Question No.9**

Marks: 1.00

Bookmark

A three phase alternator having synchronous reactance  $0.2 \Omega$  is rated as 100 MVA, 11 kV. Calculate the base current and base impedance.

- (A)  9.09 kA and  $1.31 \Omega$   
(B)  **5.25 kA and  $1.21 \Omega$  (Correct Answer)**  
(C)  9.09 kA and  $1.13 \Omega$   
(D)  5.25 kA and  $1.12 \Omega$

**Question No.10**

Marks: 1.00

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Routine maintenance of lead acid batteries should include

- (A)  coating the cable connections with petroleum jelly  
(B)  maintaining a trickle charge  
(C)  keeping the terminals clean  
(D)  **all the above (Correct Answer)**

**Question No.11**

Marks: 1.00

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Which one of the following statements is TRUE?

- (A)  The protection against direct lightning strokes and high voltage steep waves is provided by earthing of neutral  
(B)  **The earthing screen and ground wires can well protect the electrical system against direct lightning strokes (Correct Answer)**  
(C)  The lightning arrester connected between the line and earth in a power system suppresses high frequency oscillations in the line  
(D)  The lightning arrester used for the protection of the direct lightning stroke is located near the apparatus to be protected

**Question No.12**

Marks: 1.00

To minimise the risk of danger and injury, the following precautions are to be applied when charging lead-acid batteries:

- Charger must be located as far from battery as cabling will permit
  - Fluid level in each cell must be checked prior to charging
  - Contact with battery acid must be avoided
- (A)  (ii) and (iii) are correct  
 (B)  (i), (ii) and (iii) are correct (Correct Answer)  
 (C)  (i) and (iii) are correct  
 (D)  (i) and (ii) are correct

## Question No.13

Marks: 1.00

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In a single phase 'm' level diode-clamped multilevel inverter, the voltage across each DC-link capacitors is given by ..... where,  $V_{DC}$  is the DC-link voltage.

- (A)   $\frac{V_{DC}}{m+1}$   
 (B)   $mV_{DC}$   
 (C)   $\frac{V_{DC}}{m-1}$  (Correct Answer)  
 (D)   $\frac{V_{DC}}{m}$

## Question No.14

Marks: 1.00

Bookmark 

In distribution SCADA system, the term 'DAC' stands for

- (A)  Digital Acquisition and Control  
 (B)  Digital Automation and Control  
 (C)  Data Automation and Control  
 (D)  Distribution Automation and Control (Correct Answer)

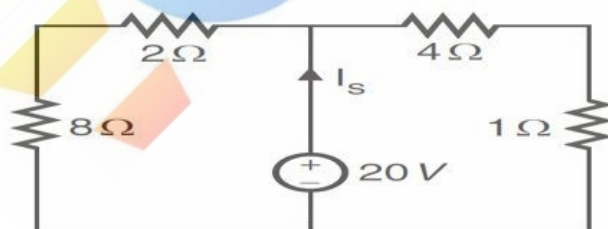
## Question No.15

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A 1000 kVA transformer has an efficiency of 95% at full load and also at 60% of full load, both at unity power factor. Determine the efficiency of the transformer at 80% of full load and unity power factor.



- (A)  92.15%  
 (B)  95.15% (Correct Answer)  
 (C)  97.15%  
 (D)  93.15%

## Question No.16

Marks: 1.00

Bookmark 

The ..... system produces the greatest magnitude of ground fault current when a fault to ground occurs.

- (A)  Ungrounded  
 (B)  Solidly grounded (Correct Answer)  
 (C)  Reactance grounded

(D)  Resistance grounded

**Question No.17**

Marks: 1.00

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The minimum wind speed needed to start the turbine and to generate output power is called

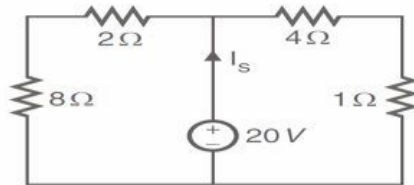
- (A)  rated wind speed
- (B)  cut-out speed
- (C)  **cut-in speed (Correct Answer)**
- (D)  furling speed

**Question No.18**

Marks: 1.00

Bookmark

Find the current  $I_s$  delivered by the voltage source in the circuit shown in Fig.



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

**Question No.19**

Marks: 1.00

Bookmark

The potential transformers (PTs) are used to extend the range of .....

- (A)  **AC voltmeters only (Correct Answer)**
- (B)  DC voltmeters only
- (C)  both AC and DC ammeters
- (D)  both AC and DC voltmeters

**Question No.20**

Marks: 1.00

Bookmark

A 1200/5, C400 CT is connected on the 1000/5 tap. What is the maximum secondary burden that can be used and still maintain rated accuracy at 20 times rated symmetrical secondary current?

- (A)  0.3  $\Omega$
- (B)  **3.33  $\Omega$  (Correct Answer)**
- (C)  0.2  $\Omega$
- (D)  4.8  $\Omega$

**Question No.21**

Marks: 1.00

Bookmark

The location of series capacitor depends on \_\_\_\_\_

- (A)  the degree of compensation only
- (B)  the characteristic of the line only
- (C)  **both the degree of compensation and the characteristic of the line (Correct Answer)**
- (D)  none of the above

**Question No.22**

Marks: 1.00

Bookmark

As per IS, for IDMT relays for the highest TMS and PSM between 4 to 20, the permissible deviation from the declared time by the manufacturer shall be within

- (A)  **7.5% (Correct Answer)**
- (B)  10.5%
- (C)  12.5%



(D)  4%

**Question No.23**

Marks: 1.00

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Optical fiber cable is ..... and has ..... bandwidth capability.

- (A)  metallic, high
- (B)  metallic, low
- (C)  non-metallic, low
- (D)  **non-metallic, high (Correct Answer)**

**Question No.24**

Marks: 1.00

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A 3-phase star/delta connected transformer having a line voltage ratio of 400 V/33000 V is provided with Merz-Price circulating-current protection. The CT on 400 V side have a current ratio 1000/5. What should be the CT ratio on 33000 V side? Assume that the line current on 400 V side is 1000 A.

- (A)  **7:5 (Correct Answer)**
- (B)   $5\sqrt{3}:7$
- (C)  5:7
- (D)   $7\sqrt{3}:5$

**Question No.25**

Marks: 1.00

Bookmark

The isolator cannot be opened unless the associated circuit breaker (CB) is ..... and the CB shall ..... only after all the isolators associated have been closed.

- (A)  close, open
- (B)  open, open
- (C)  **open, close (Correct Answer)**
- (D)  close, close

**Question No.26**

Marks: 1.00

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Gas insulated substation (GIS) offers most economic solutions for

- (A)  An urban and industrial area where space is constraint and pollution is a problem.
- (B)  Mountainous areas where site preparation, altitude, snow and ice are major problems.
- (C)  Coastal areas where pollution problems associated with salt are unavoidable.
- (D)  **All of the above (Correct Answer)**

**Question No.27**

Marks: 1.00

Bookmark

Consider the following statements and choose the correct option.

**Statement 1:** A purely reactive compensator can eliminate voltage variations caused by changes in both the real and reactive power of the load.

**Statement 2:** A purely reactive compensator cannot maintain both constant voltage and unity power factor at the same time.

- (A)  Both Statement 1 and Statement 2 are FALSE
- (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 TRUE (Correct Answer)**

**Question No.28**

Marks: 1.00

Bookmark

Consider the parallel connection of batteries as shown in Fig. The total energy storage is



- (A)  3600 Wh
- (B)  1200 Wh
- (C)  2400 Wh
- (D)  4800 Wh (Correct Answer)

Question No.29

Marks: 1.00

Bookmark

\_\_\_\_\_ generally contain circuit overcurrent devices rated at more than 30 A to protect subfeeders that extend to smaller branch-circuit panelboards.

- (A)  Service equipment panelboards
- (B)  Power Distribution Panels
- (C)  Feeder Distribution Panels (Correct Answer)
- (D)  All of the above

Question No.30

Marks: 1.00

Bookmark

In the magneto-optical current transformer (MOCT), the polarization rotation angle is

- (A)  directly proportional to square of the current enclosed
- (B)  directly proportional to the current enclosed (Correct Answer)
- (C)  inversely proportional to square of the current enclosed
- (D)  inversely proportional to the current enclosed

Question No.31

Marks: 1.00

Bookmark

According to IE-1957, the minimum vertical clearance between 66 kV electrical line and railway track is about

- (A)  7 meter
- (B)  10 meter
- (C)  14 meter (Correct Answer)
- (D)  18 meter

Question No.32

Marks: 1.00

Bookmark

The term "ETAP" in ETAP software tool used by power systems engineers stands for .....

- (A)  Electrical Transmission Analyzer Program
- (B)  Electronic Transmission Analyzer Program
- (C)  Electronic Transient Analyzer Program
- (D)  Electrical Transient Analyzer Program (Correct Answer)

Question No.33

Marks: 1.00

Bookmark

Consider the following statements and choose the correct option.

**Statement 1:** National Electric Code (NEC) requires bending radius clearance for incoming and outgoing power connections to insure the installing electrician has adequate room to make their power connections.

**Statement 2:** Underwriters Laboratories (UL) requires manufacturer recommended clearance for heat producing devices to insure for adequate room for ventilation.

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

Question No.34

Marks: 1.00

Bookmark

MHO relay is a ..... relay and is normally used for the protection of .....

- (A)  high-speed, transformer
- (B)  **high-speed, transmission line (Correct Answer)**
- (C)  slow-speed, transmission line
- (D)  slow-speed, transformer

**Question No.35**

Marks: 1.00

Bookmark

Which one of the following statements is TRUE?

- (A)  Numerical protective system require significantly more panel space than the space required by electromechanical/static systems that provide similar functions.
- (B)  Numerical relays does not have the ability to perform self-monitoring and self-testing functions, which were available in electromechanical/static relays.
- (C)  The cost per function of numerical relays is higher compared to the cost of their electromechanical and static counterparts.
- (D)  **Numerical relays place significantly less burden on instrument transformers than the burden placed by electromechanical/static relays. (Correct Answer)**

**Question No.36**

Marks: 1.00

Bookmark

Differential relay is used for the protection of various equipments such as generators, transformers, induction motors, busbars against

- (A)  Overloads
- (B)  Short Circuits
- (C)  **Internal Faults (Correct Answer)**
- (D)  External Faults

**Question No.37**

Marks: 1.00

Bookmark

Calculate the protection trip time of the inverse definite minimum time (IDMT) overcurrent relay, according to IEC 60255 protection curves. Assume extremely inverse curve type, relay pickup current = 1kA, fault current = 10 kA and time-multiplier setting (TMS) = 1.

- (A)  0.408 s
- (B)  0.208 s
- (C)  **0.808 s (Correct Answer)**
- (D)  1.08 s

**Question No.38**

Marks: 1.00

Bookmark

Consider the following statements and choose the correct option.

**Statement 1:** Abstraction enables the key benefit of cloud computing: shared, ubiquitous access.

**Statement 2:** All cloud computing applications combine their resources into pools that can be assigned on demand to users.

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

**Question No.39**

Marks: 1.00

Bookmark

A string insulator has 5 units. The voltage across the bottom most unit is 25% of total voltage. Its string efficiency is

- (A)  20%
- (B)  50%
- (C)  **80% (Correct Answer)**
- (D)  65%

**Question No.40**

Marks: 1.00

Bookmark

The solar cell short-circuit current generally depends on the

- (A)  area of the solar cell
- (B)  collection probability of the solar cell
- (C)  absorption and reflection of the solar cell
- (D)  all of the above (Correct Answer)

**Question No.41**

Marks: 1.00

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Determine the discharge time and average current output of a battery with a capacity rating of 1000 mAh if it is discharged at 1 C.

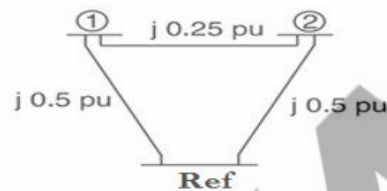
- (A)  2 hours, 1000 mA
- (B)  1 hour, 1000 mA (Correct Answer)
- (C)  1 hour, 100 mA
- (D)  2 hours, 100 mA

**Question No.42**

Marks: 1.00

Bookmark

A single line diagram of a power system is shown in Fig. A non-diagonal elements of the  $Z_{bus}$  matrix are



- (A)   $Z_{12} = Z_{21} = j0.2 \text{ pu}$  (Correct Answer)
- (B)   $Z_{12} = Z_{21} = j0.5 \text{ pu}$
- (C)   $Z_{12} = Z_{21} = j0.3 \text{ pu}$
- (D)   $Z_{12} = Z_{21} = j0.4 \text{ pu}$

**Question No.43**

Marks: 1.00

Bookmark

Which one of the following statements about the ferranti effect is TRUE?

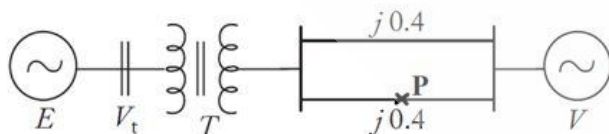
- (A)  Receiving end current becomes more than sending end current
- (B)  Receiving end power becomes more than sending end power
- (C)  Receiving end frequency becomes more than sending end frequency
- (D)  Receiving end voltage becomes more than sending end voltage (Correct Answer)

**Question No.44**

Marks: 1.00

Bookmark

Consider the power system network shown in Figure with generator voltage  $E$  and infinite bus voltage  $V$ . Generator reactance and terminal voltages are given as:  $X_d' = 0.2 \text{ p.u}$  and  $V_t = 1.0 \text{ p.u}$ . Transformer reactance is  $0.1 \text{ p.u}$ . Infinite bus voltage,  $V$  is  $1.0 \text{ p.u}$ . Generator is feeding  $1.0 \text{ p.u}$  power to the infinite bus. Calculate the maximum steady-state power that can be transferred when the three-phase fault occurs at the point 'P'.



- (A)  1.5 pu
- (B)  0.4 pu
- (C)  2.1 pu
- (D)  0.8 pu (Correct Answer)

**Question No.45**

Marks: 1.00

Bookmark 

In a power system with negligible resistance, the fault current at a point is 10 p.u. The series reactance to be included at the fault point to limit the short-circuit current to 4 p.u. is

- (A)  6.67 p.u.  
(B)  1.67 p.u.  
(C)  0.51 p.u.  
(D)  0.15 p.u. (Correct Answer)

**Question No.46**

Marks: 1.00

Bookmark 

In the context of cyber security, the term "TCP/IP" stands for\_\_\_\_\_

- (A)  Transmission Control Protocol/ internet protocol (Correct Answer)  
(B)  Transaction Control protocol/ intranet protocol  
(C)  Transmission Contribution protocol/ internet protocol  
(D)  Transfer Control Protocol/ intranet protocol

**Question No.47**

Marks: 1.00

Bookmark 

Consider the following statements and choose the correct option.

**Statement 1:** A nickel-cadmium battery is not rechargeable and is classified as hazardous.

**Statement 2:** An alkaline manganese battery is used in torches and is classified as hazardous.

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

**Question No.48**

Marks: 1.00

Bookmark 

What is the minimum distance workers must maintain between conductive materials and overhead power lines up to 50 kV?

- (A)  20 feet  
(B)  30 feet  
(C)  40 feet  
(D)  10 feet (Correct Answer)

**Question No.49**

Marks: 1.00

Bookmark 

The best location of installing capacitor bank to reduce the electricity distribution losses to the maximum extent is at

- (A)  main sub-station bus bars  
(B)  motor terminals (Correct Answer)  
(C)  motor control centre  
(D)  distribution board bus bars

**Question No.50**

Marks: 1.00

Bookmark 

Nickel-iron cell has ..... weight and ..... life than that of a lead-acid cell.

- (A)  less, longer (Correct Answer)  
(B)  more, longer  
(C)  less, shorter  
(D)  more, shorter

**Question No.51**

Marks: 1.00

Bookmark 

In a lead-acid battery, the energy is stored in the form of .....

- (A)  charged ions  
(B)  electrostatic energy

- (C)  **chemical energy (Correct Answer)**  
(D)  electromagnetic energy

**Question No.52**

Marks: 1.00

Bookmark

The series compensator is functionally a controlled..... source connected in series with the transmission line to control its .....

- (A)  voltage, voltage  
(B)  current, voltage  
(C)  current, current  
(D)  **voltage,current (Correct Answer)**

**Question No.53**

Marks: 1.00

Bookmark

If the voltage applied to the core and sheath of a cable is halved, the reactive power generated by the cable will be ..... times of the original value.

- (A)   $\frac{1}{4}$  (Correct Answer)  
(B)  4  
(C)   $\frac{1}{2}$   
(D)  2

**Question No.54**

Marks: 1.00

Bookmark

According to IS802:1995, the small angle towers with tension string can be used for line deviation from

- (A)  **0° to 15° (Correct Answer)**  
(B)  30° to 60°  
(C)  15° to 30°  
(D)  60° to 90°

**Question No.55**

Marks: 1.00

Bookmark

A photovoltaic panel has five modules connected in series, each module having an open circuit voltage ( $V_{oc}$ ) of 12 V and short circuit current ( $I_{sc}$ ) of 2A. What should be the voltage axis intercept of the IV characteristics of the series system?

- (A)  6 V  
(B)  12 V  
(C)  2.4 V  
(D)  **60 V (Correct Answer)**

**Question No.56**

Marks: 1.00

Bookmark

Consider the following statements and choose the correct option.

**Statement 1:** Biomass is a renewable source of energy, derived from burning animal and plant waste.

**Statement 2:** When you burn wood to generate heat in your house, you are using biomass energy.

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

**Question No.57**

Marks: 1.00

Bookmark

..... cables encase the optical fibres within the earth wire which is used to carry fault currents and to provide shielding from lightning.

- (A)  **Optical ground wire (Correct Answer)**  
(B)  Wrap-on or lashed

- (C)  ADSS  
 (D)  None of the above

**Question No.58**

Marks: 1.00

Bookmark

..... refers to the interface required for exchanges between the master station and the operators or users of the SCADA system.

- (A)  Master Station  
 (B)  Remote Terminal Units  
 (C)  **Human-Machine Interface (Correct Answer)**  
 (D)  Communication System

**Question No.59**

Marks: 1.00

Bookmark

An alternator is supplying a load of 500 kW at a p.f of 0.5 lagging. If the power factor is raised to unity, how many more kW can alternator supply for the same kVA loading?

- (A)  **500 kW (Correct Answer)**  
 (B)  1000 kW  
 (C)  250 kW  
 (D)  750 kW

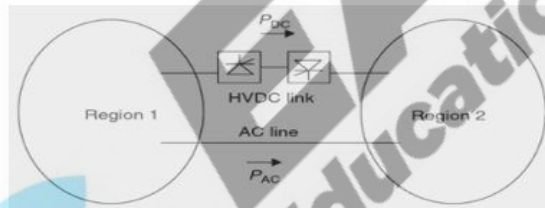
**Question No.60**

Marks:

1.00

Bookmark

Two regional systems - 1 and - 2, each having several synchronous generators and loads are inter-connected by an AC line and a HVDC link as shown in the fig. Which of the following statements is true in the steady state?



- (A)  **0.8 pu (Correct Answer)**  
 (B)  0.4 pu  
 (C)  2.1 pu  
 (D)  1.5 pu

**Computer Knowledge - Computer Knowledge**

**Question No.1**

Marks: 1.00

Bookmark

Which among the following is not a valid type of System calls used in Operating System?

- (A)  Process control  
 (B)  **Access control (Correct Answer)**  
 (C)  Device management  
 (D)  File management

**Question No.2**

Marks: 1.00

Bookmark

\_\_\_\_\_ is a family of standards specified by the IEEE Computer Society for maintaining compatibility between operating systems.

- (A)  BIOS  
 (B)  **POSIX (Correct Answer)**  
 (C)  RIOP  
 (D)  PREFIX

**Question No.3**

Marks: 1.00

Bookmark

When selecting the \_\_\_\_\_ menu in the formulas tab, it show arrows that indicate which cells affect the value of the currently selected cell.

- (A)  Consolidate
- (B)  Trace Dependents
- (C)  Flash Fill
- (D)  Trace Precedents (Correct Answer)

**Question No.4**

Marks: 1.00

Bookmark

The OSI layer in networking that deals with the serial transfer of data is \_\_\_\_\_ layer.

- (A)  Network
- (B)  Physical (Correct Answer)
- (C)  Virtual
- (D)  Session

**Question No.5**

Marks: 1.00

Bookmark

\_\_\_\_\_ is the way for an attacker to execute a short piece of machine code on a remote machine, thus compromising it and these attacks are due to an implementation flaw.

- (A)  Christmas Day attack
- (B)  The stack buffer overflow (Correct Answer)
- (C)  Code Instruction Phase
- (D)  Morris Worm

**Question No.6**

Marks: 1.00

Bookmark

\_\_\_\_\_ was the first computer that used the Vacuum tube technology.

- (A)  IBM 650
- (B)  PDP
- (C)  ENIAC (Correct Answer)
- (D)  Honeywell 600

**Question No.7**

Marks: 1.00

Bookmark

\_\_\_\_\_ view is ideal for focusing on the words in a presentation, while you try to enter or read text.

- (A)  Notes view
- (B)  Outline View (Correct Answer)
- (C)  Slide sorter view
- (D)  Online View

**Question No.8**

Marks: 1.00

Bookmark

PDA is one of the famous hand held devices used by business professionals, what does PDA stand for ?

- (A)  Personal Display Assistant
- (B)  Programming Digital Assistant
- (C)  Public Demo Assistant
- (D)  Personal Digital Assistant (Correct Answer)

**Question No.9**

Marks: 1.00

Bookmark

In computer memory design, \_\_\_\_\_ can configure a cluster of microprocessors in a multiprocessing system, thereby improving performance and expanding system capabilities.

- (A)  FUMA
- (B)  NCPU
- (C)  SMPA
- (D)  NUMA (Correct Answer)



**Question No.10**

Marks: 1.00

Bookmark 

When given custom colors for formatting background \_\_\_\_\_ color option will give you a mixture of different colors with the colors blending into one another

- (A)  **Gradient (Correct Answer)**  
(B)  Picture  
(C)  Table  
(D)  Solid

**Gujarati Language and Grammar - Gujarati Language and Grammar****Question No.1**

Marks: 1.00

Bookmark 

નીચેના વાક્યમાં કયા ભાગમાં ભૂલ છે તે જણાવો.  
તમારી ભૂલ પ્રત્યે હું તમારું લક્ષ્ય ઘેરું છું.

- (A)  ભૂલ  
(B)  પ્રત્યે  
(C)  ઘેરું છું  
(D)  **લક્ષ્ય (Correct Answer)**

**Question No.2**

Marks: 1.00

Bookmark 

નિયમિત સમયગાળે પ્રગટ થતાં પત્રને એક શબ્દમાં શું કહેવાય છે?

- (A)  અહેવાલ  
(B)  **સામયિક (Correct Answer)**  
(C)  દૈનિક પત્ર  
(D)  વૃત્તાંત

**Question No.3**

Marks: 1.00

Bookmark 

"પાણી"નો કયો એક અર્થ સાચો નથી?

- (A)  **હાથ (Correct Answer)**  
(B)  વટ  
(C)  શૂરાતન  
(D)  જળ

**Question No.4**

Marks: 1.00

Bookmark 

આપેલા વિકલ્પોમાંથી કઈ રચના પ્રેરક નથી?

- (A)  તેણે ભાઈ પાસે લખાવ્યું  
(B)  **શિક્ષકે તેને ઊઠબેસ કરાવી (Correct Answer)**  
(C)  મારાથી બોલી જવાયું  
(D)  શેઠ કામ કરાવે છે

**Question No.5**

Marks: 1.00

Bookmark 

આપેલા વિકલ્પોમાં એક તળપદો શબ્દ છે તે શોધો.

- (A)  ટપલી  
(B)  **ફોલ (Correct Answer)**  
(C)  રકઝક  
(D)  દુગ્ધ

**Question No.6**

Marks: 1.00

Bookmark 

આપેલા વિકલ્પોમાં કયું વિરુદ્ધાર્થી જોડકું ખોટું છે?

- (A)  વિસ્તૃત X સંક્ષિપ્ત  
(B)  વ્યર્થ X સાર્થક  
(C)  સાન્ન X અશાંત (Correct Answer)  
(D)  સંધિ X વિગ્રહ

Question No.7

Marks: 1.00

Bookmark

પદ્ધત્ત ગોઠવેને યોગ્ય વાક્ય રચો.

પૂરો ઉનાળો થતા દિવસો આવ્યા ચોમાસાના

- (A)  પૂરો ઉનાળો થતા ચોમાસાના આવ્યા દિવસો  
(B)  પૂરો ઉનાળો થતા આવ્યા દિવસો ચોમાસાના  
(C)  ઉનાળો પૂરો થતા ચોમાસાના આવ્યા દિવસો  
(D)  ઉનાળો પૂરો થતા ચોમાસાના દિવસો આવ્યા (Correct Answer)

Question No.8

Marks: 1.00

Bookmark

ઘાતુના વાસણો બનાવનાર અને વેચનારને શું કહેવાય છે?

- (A)  કંસારો (Correct Answer)  
(B)  કોઠારી  
(C)  લુહાર  
(D)  મણિયાર

Question No.9

Marks: 1.00

Bookmark

નીચે આપેલા વાક્યોમાંથી સંકુલ વાક્ય બનાવો.

- તમે કશું કહેશો નહિ

- તમને કોઈ ગણશે નહિ

- (A)  તમે કશું કહેશો નહિ અથવા તમને કોઈ ગણશે નહિ  
(B)  તમે કશું કહેશો નહિ છતાં તમને કોઈ ગણશે નહિ  
(C)  જો તમે કશું કહેશો નહિ તો તમને કોઈ ગણશે નહિ (Correct Answer)  
(D)  તમે કશું કહેશો નહિ પણ તમને કોઈ ગણશે નહિ

Question No.10

Marks: 1.00

Bookmark

આપેલા વિકલ્પોમાંથી ઉપમા અલંકારનું વાક્ય કયું છે?

- (A)  હું સંસારસાગરમાં ડૂબી ગયો  
(B)  હૈયું જાણે હિમાલય  
(C)  ગાંધીજી તે ગાંધીજી  
(D)  દમયંતીનું મુખ ચંદ્ર જેવું છે (Correct Answer)