

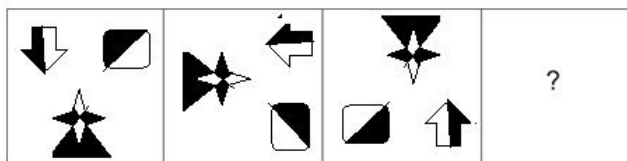
**OIL AND NATURAL GAS CORPORATION LIMITED**

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|------------------|-----------------------------------|
| Participant ID   |                                   |
| Participant Name |                                   |
| Test Center Name |                                   |
| Test Date        | 16/08/2022                        |
| Test Time        | 8:30 AM - 10:30 AM                |
| Subject          | Diploma in Electrical Engineering |

Section : **General Aptitude and Reasoning**

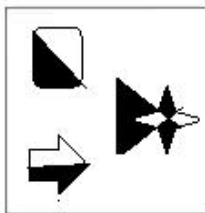
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Your Personal Exam Guide

**Q.1** Select the figure that will replace the question mark (?) in the following figure series.

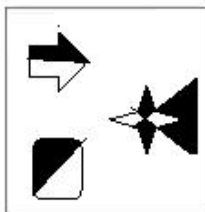


**Ans**

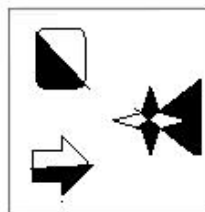
✗ 1.



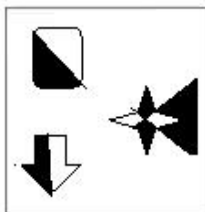
✗ 2.



✓ 3.



✗ 4.



Question ID : 1841224627

Status : Answered

Chosen Option : 3

**Q.2** A medicine-capsule is in the shape of a cylinder of diameter 0.6 cm with two hemispheres stuck to each of its ends. The length of entire capsule is 2 cm. The approximate capacity of the capsule (in cubic cm) is:

**Ans** ✗ 1. 0.472

✗ 2. 0.488

✗ 3. 0.481

✓ 4. 0.509

Question ID : 1841224633

Status : Answered

Chosen Option : 2

**Q.3** Which of these rivers originates from the Mansarovar Mountains?

- Ans**
- ☐ 1. Mahanadi River
  - ☒ 2. Brahmaputra River
  - ☐ 3. Krishna River
  - ☐ 4. Narmada River

Question ID : 1841224636  
Status : Answered  
Chosen Option : 2

**Q.4** In a certain code, if 'S' means 'addition', '#' means 'multiplication', '@' means 'division' and '&' means 'subtraction', then find the value of  $595 @ 7 \# 5 S 16 \& 9 = ?$

- Ans**
- ☐ 1. 12
  - ☐ 2. 352
  - ☒ 3. 432
  - ☐ 4. 24

Question ID : 1841224628  
Status : Answered  
Chosen Option : 3

**Q.5** A man sold two laptops for ₹57,120 each. On one laptop he gains 12%, while on the other he loses 15%. How much is his gain or loss in the whole transaction?

- Ans**
- ☐ 1. Loss ₹ 3,690
  - ☐ 2. Profit ₹ 3,250
  - ☒ 3. Loss ₹ 3,960
  - ☐ 4. Profit ₹ 3,520

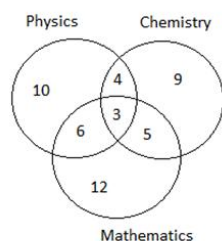
Question ID : 1841224630  
Status : Answered  
Chosen Option : 3

**Q.6** In a certain code language, 'RAJ' is written as 7, 'VIPUL' is written as 11, how will 'RATNESH' be written in that language?

- Ans**
- ☐ 1. 11
  - ☐ 2. 13
  - ☒ 3. 15
  - ☐ 4. 10

Question ID : 1841224626  
Status : Answered  
Chosen Option : 2

- Q.7** Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of students who have scored more than 75% marks in different subjects.



How many such students are there who have scored more than 75% in Physics and Chemistry both but not in Mathematics?

- Ans**
- ☒ 1. 3
  - ☒ 2. 14
  - ☒ 3. 7
  - ☒ 4. 4

Question ID : 1841224624

Status : Answered

Chosen Option : 4

- Q.8** The difference between the compound and simple interest on a certain sum at 12% per annum for 2 years is ₹504. What will be the amount at the end of 1 year on the same principal if compounded half yearly?

- Ans**
- ☒ 1. ₹39,604
  - ☒ 2. ₹39,458
  - ☒ 3. ₹39,326
  - ☒ 4. ₹39,200

Question ID : 1841224631

Status : Answered

Chosen Option : 1

- Q.9** In which part of the constitution The Fundamental Duties of citizens are set out?

- Ans**
- ☒ 1. Part VI–A
  - ☒ 2. Part VII–A
  - ☒ 3. Part IV–A
  - ☒ 4. Part V–A

Question ID : 1841224638

Status : Answered

Chosen Option : 3

Q.10 Fill in with most appropriate word:

Sohan came across his roommate \_\_\_\_\_ reading a literary journal.

- Ans
- ☒ 1. steadfastly
  - ☒ 2. humorously
  - ☒ 3. avidly
  - ☒ 4. modestly

Question ID : 1841224641  
Status : Answered  
Chosen Option : 3

Q.11 select the option that is appropriate for the blank.

The chandelier fell \_\_\_\_\_ the ceiling and broke into pieces.

- Ans
- ☒ 1. of
  - ☒ 2. out of
  - ☒ 3. from
  - ☒ 4. on

Question ID : 1841224640  
Status : Answered  
Chosen Option : 3

Q.12 What is the purpose behind forming a Joint Liability Group?

- Ans
- ☒ 1. Purchasing houses
  - ☒ 2. Establishing Industries
  - ☒ 3. Forming companies
  - ☒ 4. Availing micro credit

Question ID : 1841224635  
Status : Answered  
Chosen Option : 2

Q.13 If the sum of two numbers is 10 and their product is 21, find the sum of the cube of the numbers.

- Ans
- ☒ 1. 384
  - ☒ 2. 420
  - ☒ 3. 370
  - ☒ 4. 456

Question ID : 1841224629  
Status : Answered  
Chosen Option : 3

Q.14 The part of flower containing anther and filament is called?

- Ans
- ☒ 1. Petal
  - ☒ 2. Receptacle
  - ☒ 3. Pistil
  - ☒ 4. Stamen

Question ID : 1841224637

Status : Answered

Chosen Option : 1

Q.15 select the option that is appropriate for the blank.

Next year, I am going to America to \_\_\_\_\_ my son.

- Ans
- ☒ 1. visited
  - ☒ 2. visit
  - ☒ 3. visiting
  - ☒ 4. will visit

Question ID : 1841224639

Status : Answered

Chosen Option : 2

Q.16 Two trains A and B are running at 150 km/hr and 90 km/hr respectively in the same direction. Fast train A completely passes a boy sitting in the train B in 9 seconds. What is the length of the train A (in m)?

- Ans
- ☒ 1. 150 m
  - ☒ 2. 135 m
  - ☒ 3. 180 m
  - ☒ 4. 125 m

Question ID : 1841224632

Status : Answered

Chosen Option : 1

Q.17 Which of the following philosophical group was established by Debendranath Tagore?

- Ans
- ☒ 1. Tattvabodhini Sabha
  - ☒ 2. Arya Samaj
  - ☒ 3. Atmiya Sabha
  - ☒ 4. PrarthanaSamaj

Question ID : 1841224634

Status : Answered

Chosen Option : 1

**Q.18** Refer to the following letter, number, symbol string and answer the question given below:

K 5 3 \$ E 3 A % U P 4 δ E 6 A \$ \$ E Ψ 9 ≥ Z 2 F # 3 U # 7 2 π E 6

How many such vowels are there in the string each of which is immediately preceded by a number and immediately followed by a symbol?

- Ans**
- ☒ 1. 2
  - ☒ 2. 4
  - ☒ 3. 3
  - ☒ 4. 5

Question ID : **1841224625**

Status : **Answered**

Chosen Option : **2**

**Comprehension:**

Read the passage and answer the questions that follow:

Yoga originated in ancient India thousands of years ago, long before the first religion or belief system was born. It is believed that Shiva is the first Yogi or Adiyogi and the first guru. Thousands of years ago, on the banks of Lake Kantisarovar in Himalayas, Adiyogi shared his knowledge into legendary seven sages as it was hard to put all his wisdom and knowledge in one person.

The fossil remains of Indus-Saraswati civilization are an evidence of the presence of Yoga in ancient India. This presence finds a mention in the folk traditions. It is included in the Indus valley civilization, Buddhist and Jain traditions. According to the studies, Yoga was being practiced under the direct guidance of a Guru and its spiritual value was given a lot of importance. Sun was given the highest importance during Vedic period and that's how Suryanamaskar was invented later on. However, Maharishi Patanjali is known as the father of Modern Yoga. He did not invent Yoga as it was already there in various forms. He assimilated it into the system. He saw that it was getting quite complex for anyone to understand it in any meaningful way. So he assimilated and included all aspects into a certain format – Yoga Sutras.

**SubQuestion No : 19**

**Q.19** Select the option that is the correct synonym for 'assimilated'.

- Ans**
- ☒ 1. digested
  - ☒ 2. equated
  - ☒ 3. adjusted
  - ☒ 4. incorporated

Question ID : 1841224644

Status : Answered

Chosen Option : 4

**Comprehension:**

Read the passage and answer the questions that follow:

Yoga originated in ancient India thousands of years ago, long before the first religion or belief system was born. It is believed that Shiva is the first Yogi or Adiyogi and the first guru. Thousands of years ago, on the banks of Lake Kantisarovar in Himalayas, Adiyogi shared his knowledge into legendary seven sages as it was hard to put all his wisdom and knowledge in one person.

The fossil remains of Indus-Saraswati civilization are an evidence of the presence of Yoga in ancient India. This presence finds a mention in the folk traditions. It is included in the Indus valley civilization, Buddhist and Jain traditions. According to the studies, Yoga was being practiced under the direct guidance of a Guru and its spiritual value was given a lot of importance. Sun was given the highest importance during Vedic period and that's how Suryanamaskar was invented later on. However, Maharishi Patanjali is known as the father of Modern Yoga. He did not invent Yoga as it was already there in various forms. He assimilated it into the system. He saw that it was getting quite complex for anyone to understand it in any meaningful way. So he assimilated and included all aspects into a certain format – Yoga Sutras.

SubQuestion No : 20

Q.20 Which is the most appropriate title of the passage?

- Ans
- ☒ 1. Yoga
  - ☒ 2. Relevance and Importance of Yoga
  - ☒ 3. Yogic History
  - ☒ 4. Yoga and Life

Question ID : 1841224643

Status : Answered

Chosen Option : 3

Section : Domain Knowledge

Q.1 The stall torque represents the point on the characteristics torque and speed graph of a dc motor at which the torque is a \_\_\_\_\_.

- Ans
- ☒ 1. Maximum and the shaft is normal rotating speed.
  - ☒ 2. Minimum, but the shaft is not rotating
  - ☒ 3. Minimum and the shaft is normal rotating speed.
  - ☒ 4. Maximum, but the shaft is not rotating.

Question ID : 1841224657

Status : Answered

Chosen Option : 1

**Q.2** In \_\_\_\_\_ the gasification agent enters the bed at a relatively fast rate from the bottom of the vessel and exits from the top.

- Ans**
- ☐ 1. Curtly lite gasifier
  - ☐ 2. Entrained flow gasifier
  - ☐ 3. Fixed bed gasifier
  - ☒ 4. Fluidized gasifier

Question ID : 1841224719  
Status : Answered  
Chosen Option : 3

**Q.3** In induction motor, the three phases of the stator are connected in series across either a single AC or DC source that type of connection braking is known as \_\_\_\_\_.

- Ans**
- ☐ 1. Self-Excited Braking Using Capacitor
  - ☒ 2. Zero Sequence Braking
  - ☐ 3. AC Dynamic Braking
  - ☐ 4. DC Dynamic Braking

Question ID : 1841224703  
Status : Answered  
Chosen Option : 2

**Q.4** Which PLC software is supported ladder logic, STL, and structured text type of programming language?

- Ans**
- ☐ 1. Winproladder
  - ☒ 2. WPLSoft
  - ☐ 3. I-Trilogi
  - ☐ 4. Microladder

Question ID : 1841224698  
Status : Answered  
Chosen Option : 1

**Q.5** What is the time between the instant of occurrence of the fault to the instant at which the relay contacts open?

- Ans**
- ☐ 1. The Breaker Time
  - ☒ 2. The Relay Time
  - ☐ 3. Time graded systems
  - ☐ 4. Selectivity time

Question ID : 1841224714  
Status : Answered  
Chosen Option : 3

**Q.6** When anode is positive with respect to cathode, with gate circuit open, thyristor is said to be \_\_\_\_\_.

- Ans**
- ☒ 1. Forward conduction mode
  - ☒ 2. Forward blocking mode
  - ☒ 3. Reverse biased mode
  - ☒ 4. Reverse blocking mode

Question ID : **1841224668**  
Status : **Answered**  
Chosen Option : **2**

**Q.7** In a three-phase alternator, if one complete revolution produces two complete positive and negative pulses for each cycle, then the number of poles are \_\_\_\_\_.

- Ans**
- ☒ 1. 10
  - ☒ 2. 4
  - ☒ 3. 2
  - ☒ 4. 8

Question ID : **1841224680**  
Status : **Answered**  
Chosen Option : **2**

**Q.8** Which among statements given is wrong related to modulation in communication system?

- Ans**
- ☒ 1. Mixing up of other signals with main signals
  - ☒ 2. Its reduce the antenna height
  - ☒ 3. Multiplexing
  - ☒ 4. Increasing the communication distance

Question ID : **1841224704**  
Status : **Answered**  
Chosen Option : **1**

**Q.9** Which instruction represents transmission data pin for serial port in UART mode?

- Ans**
- ☒ 1. TUD
  - ☒ 2. TXD
  - ☒ 3. RRD
  - ☒ 4. RXD

Question ID : **1841224684**  
Status : **Answered**  
Chosen Option : **2**

**Q.10** Which component reduces ripples from rectifier DC output that is fed to DC traction motor?

- Ans**
- ☒ 1. On-load tap changer
  - ☒ 2. ARNO converter
  - ☒ 3. Choke
  - ☒ 4. Protective equipments

Question ID : 1841224724

Status : **Answered**

Chosen Option : 2

**Q.11** Which is used to protect branch circuit from overloads and short circuits?

- Ans**
- ☒ 1. Distribution board
  - ☒ 2. Main switchboard
  - ☒ 3. Service board
  - ☒ 4. Panel board

Question ID : 1841224708

Status : **Answered**

Chosen Option : 1

**Q.12** How many bits of RISC multicore processor designs are offered by ARM?

- Ans**
- ☒ 1. 64 bit only
  - ☒ 2. 16 bit and 32 bit both
  - ☒ 3. 32 bit and 64 bit both
  - ☒ 4. 16 bit only

Question ID : 1841224685

Status : **Answered**

Chosen Option : 3

**Q.13** Which of the following is an INCORRECT statement for electric traction system?

- Ans**
- ☒ 1. Full driving torque is available from standstill.
  - ☒ 2. Engine can be run at its most suitable speed range.
  - ☒ 3. It has a smooth starting without shocks.
  - ☒ 4. It produces high heat to operate the engine.

Question ID : 1841224722

Status : **Answered**

Chosen Option : 1

**Q.14** Which type of relay gives an indication of the fault at very early stage, by anticipating the fault and operating the alarm circuit for protection of transformer?

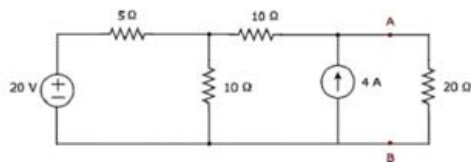
- Ans
- ☒ 1. Impedance relay
  - ☒ 2. Buchholz relay
  - ☒ 3. Differential relay
  - ☒ 4. Over current relay

Question ID : 1841224716

Status : Answered

Chosen Option : 2

**Q.15** What is the thevenin's equivalent resistance across the  $20\ \Omega$  in given circuit?



- Ans
- ☒ 1.  $10/7\ \Omega$
  - ☒ 2.  $40/3\ \Omega$
  - ☒ 3.  $50/3\ \Omega$
  - ☒ 4.  $20/7\ \Omega$

Question ID : 1841224651

Status : Answered

Chosen Option : 2

**Q.16** Which is correct characteristics of transducer in order to avoid loading effects?

- Ans
- ☒ 1. Low input impedance and high output impedance
  - ☒ 2. Using by overload protection
  - ☒ 3. High input impedance and low output impedance
  - ☒ 4. Work with corrosive environments

Question ID : 1841224695

Status : Answered

Chosen Option : 3

Q.17 Identify the following electrician tool name?



- Ans
- ☐ 1. Cable cutters
  - ☐ 2. Safety knife
  - ☐ 3. Hacksaws
  - ☒ 4. Spanners

Question ID : 1841224691  
Status : Answered  
Chosen Option : 1

Q.18 Which is correct statement with regard to steam jet draught?

- Ans
- ☐ 1. Less space requirement
  - ☐ 2. Higher draught production
  - ☐ 3. Capability of using low grade fuels
  - ☒ 4. Simple and cheap system

Question ID : 1841224646  
Status : Answered  
Chosen Option : 2

Q.19 Which among the following is the dynamic characteristics of an instrument?

- Ans
- ☐ 1. Linearity
  - ☐ 2. Drift
  - ☒ 3. Frequency response
  - ☐ 4. Resolution

Question ID : 1841224694  
Status : Answered  
Chosen Option : 3

Q.20 Which type of fibers are used for short-distance transmission of signals?

- Ans
- ☒ 1. Single-Mode Fibres
  - ☒ 2. Multimode Fibres
  - ☒ 3. Glass Fibres
  - ☒ 4. Plastic Optical Fibres

Question ID : 1841224706  
Status : Answered  
Chosen Option : 1

Q.21 Which type of solar collector boiling the boiler up to 80 °C?

- Ans
- ☒ 1. Cylindrical parabolic concentrator collector
  - ☒ 2. Flat plate solar collector
  - ☒ 3. Rectangle plate solar collector
  - ☒ 4. Triangle plate solar collector

Question ID : 1841224662  
Status : Answered  
Chosen Option : 2

Q.22 Which device is considered to be two SCR connected in anti-parallel?

- Ans
- ☒ 1. GTO
  - ☒ 2. DIAC
  - ☒ 3. MOSFET
  - ☒ 4. TRIAC

Question ID : 1841224667  
Status : Answered  
Chosen Option : 4

Q.23 \_\_\_\_\_ માં પ્રાથમિક બળતણ ઊંચા તાપમાને ઉષ્મીય ઊર્જા ઉત્પન્ન કરે છે અને પ્રક્રિયામાંથી ઉત્સર્જિત ઉષ્માનો ઉપયોગ રિકવરી બોઇલર અને ટર્બાઇન જનરેટર મારફતે પાવર ઉત્પન્ન કરવા માટે થાય છે.

- Ans
- ☒ 1. સ્ટીમ-ટર્બાઇન ટોપિંગ સિસ્ટમ.
  - ☒ 2. બોટમિંગ સાયકલ
  - ☒ 3. ટોપિંગ સાયકલ
  - ☒ 4. રિસાયક્લિંગ

Question ID : 1841224688  
Status : Answered  
Chosen Option : 1

**Q.24** Which design specification is not required to be considered for AC drives?

- Ans
- ☐ 1. Frequency range
  - ☐ 2. Operating temperature
  - ☐ 3. continues current
  - ☒ 4. Rectifier controller

Question ID : 1841224700  
Status : Answered  
Chosen Option : 4

**Q.25** Which is correct formula for finding the number of poles in low voltage line?

- Ans
- ☐ 1.  $\text{Span/length} + 1$
  - ☐ 2.  $1/\text{span} + \text{length}$
  - ☐ 3.  $1/\text{length} + \text{span}$
  - ☒ 4.  $\text{Length/Span} + 1$

Question ID : 1841224692  
Status : Answered  
Chosen Option : 4

**Q.26** With reference to HVDC system which statement below is incorrect?

- Ans
- ☐ 1. Synchronize AC produced by renewable energy sources.
  - ☐ 2. Endpoint-to-endpoint long-haul bulk power transmission without intermediate.
  - ☐ 3. Power transmission and stabilization between unsynchronized AC distribution systems
  - ☒ 4. Circuit breaking Is easy in D.C circuits, therefore the coast of dc circuit is low.

Question ID : 1841224674  
Status : Answered  
Chosen Option : 4

**Q.27** The luminous intensity of a lamp is 600 CP. Find the flux in the hemisphere containing the source of light and zero above the horizontal.

- Ans
- ☐ 1. 2130.92 lumens
  - ☒ 2. 3769.91 lumens
  - ☐ 3. 4835.78 lumens
  - ☐ 4. 4486.85 lumens

Question ID : 1841224713  
Status : Answered  
Chosen Option : 2

**Q.28** A \_\_\_\_\_ is a conductor which connects localized generating station to the area where power is to be distributed.

- Ans**
- ☒ 1. Distributer
  - ☒ 2. Feeder
  - ☒ 3. Transmission
  - ☒ 4. Service main

Question ID : 1841224676

Status : Answered

Chosen Option : 2

**Q.29** Which type of batteries are the most efficient and preferred for electrical vehicle?

- Ans**
- ☒ 1. Lead-Acid Batteries
  - ☒ 2. Lithium-ion batteries
  - ☒ 3. Nickel-Metal Hydride Batteries
  - ☒ 4. Solid state batteries

Question ID : 1841224721

Status : Answered

Chosen Option : 3

**Q.30** Acetone is a bio mass product that is related to \_\_\_\_\_ category.

- Ans**
- ☒ 1. Detergents and Cleaning Products
  - ☒ 2. Cosmetics and Perfumes
  - ☒ 3. Food Additives and Nutritional Supplements
  - ☒ 4. Fuel

Question ID : 1841224666

Status : Answered

Chosen Option : 3

**Q.31** The art of determining per unit cost of production of electrical energy is known as \_\_\_\_\_.

- Ans**
- ☒ 1. Maximum rate of power production
  - ☒ 2. Economics of power generation
  - ☒ 3. Lowest rate of power generation
  - ☒ 4. Rate of power production

Question ID : 1841224649

Status : Answered

Chosen Option : 2

**Q.32** \_\_\_\_\_ is employed only when power is generated at low voltage and the substation is located at the centre of the load?

- Ans**
- ☒ 1. Ring system
  - ☒ 2. Interconnected system
  - ☒ 3. Loop system
  - ☒ 4. Radial system

Question ID : **1841224677**  
Status : **Answered**  
Chosen Option : **4**

**Q.33** Which of the following is an INCORRECT example of materials used to produce bioenergy?

- Ans**
- ☒ 1. Animal manure
  - ☒ 2. Purpose grown crops
  - ☒ 3. Swarf of material
  - ☒ 4. Municipal solid waste

Question ID : **1841224717**  
Status : **Answered**  
Chosen Option : **3**

**Q.34** Among the following, which AC track electrification is not used in traction system in railway?

- Ans**
- ☒ 1. AC 3 phase 4 wire 33 kV
  - ☒ 2. AC 3 phase 3.7 KV system
  - ☒ 3. AC single phase 20/25 kV, 50/60 Hz
  - ☒ 4. AC single phase 15/16kV, 16.1/25 Hz

Question ID : **1841224723**  
Status : **Answered**  
Chosen Option : **1**

**Q.35** Which is used as extensions to screwdrivers and allow these to apply torque to hexagonal fastenings?

- Ans**
- ☒ 1. Claw Hammer
  - ☒ 2. Chisel
  - ☒ 3. Spanners
  - ☒ 4. Hex Key

Question ID : **1841224690**  
Status : **Answered**  
Chosen Option : **4**

**Q.36** Which of the following is an INCORRECT statement about transformers connected in parallel to line?

- Ans
- ☒ 1. Power supply can be maintained if one unit fails
  - ☒ 2. Additional unit can be installed if load demand increases
  - ☒ 3. Cost of spares will be improve when extra unit connected according to load demand
  - ☒ 4. Maximum operating efficiency archive

Question ID : **1841224687**  
Status : **Answered**  
Chosen Option : **3**

**Q.37** Which of the following is an INCORRECT statement for digital modulation camper with analog modulation in communication?

- Ans
- ☒ 1. It requires a lesser channel bandwidth
  - ☒ 2. Better noise immunity
  - ☒ 3. Repeaters can be used between transmitters and receivers
  - ☒ 4. Becomes simpler and cheaper as compared

Question ID : **1841224705**  
Status : **Answered**  
Chosen Option : **4**

**Q.38** Which type of DC motor has two types of field windings?

- Ans
- ☒ 1. Series-wound motor
  - ☒ 2. Compound-wound motor
  - ☒ 3. Shunt-wound motor
  - ☒ 4. Permanent magnet wound motor

Question ID : **1841224656**  
Status : **Answered**  
Chosen Option : **2**

**Q.39** Which parameter of transmission line is constituted when two conductors separated by an insulating material?

- Ans
- ☒ 1. Inductance
  - ☒ 2. Conductance
  - ☒ 3. Capacitance
  - ☒ 4. Resistance

Question ID : **1841224673**  
Status : **Answered**  
Chosen Option : **3**

**Q.40** \_\_\_\_\_ is a type of renewable power plant that is environment friendly, easy to be operated and low operation cost.

- Ans**
- ☐ 1. Tidal power plant
  - ☒ 2. Micro-hydro power plant
  - ☐ 3. Solar thermal plant
  - ☐ 4. Bio mass thermal plant

Question ID : **1841224647**  
Status : **Answered**  
Chosen Option : **2**

**Q.41** Which of the following argument is not true with reference to a wind energy conversion system?

- Ans**
- ☐ 1. No fuel and its transport is required
  - ☐ 2. Wind energy is fluctuating in nature
  - ☒ 3. Wind energy conversion system does not need storage devices
  - ☐ 4. Produces ample noise.

Question ID : **1841224648**  
Status : **Answered**  
Chosen Option : **3**

**Q.42** The EMF equation of a DC generator is  $E_g = P\phi ZN/60A$  Where A is represent as \_\_\_\_\_.

- Ans**
- ☐ 1. Armature conductor
  - ☒ 2. Number of parallel lanes within the armature
  - ☐ 3. Armature winding slots on core
  - ☐ 4. Armature rotor speed

Question ID : **1841224658**  
Status : **Answered**  
Chosen Option : **2**

**Q.43** The main advantage of an electrical drive is that \_\_\_\_\_ can be easily optimized.

- Ans**
- ☐ 1. cost control
  - ☐ 2. current control
  - ☒ 3. motion control
  - ☐ 4. heat control

Question ID : **1841224699**  
Status : **Answered**  
Chosen Option : **2**

Q.44 In direct current electric system, power can be measured by \_\_\_\_\_.

- Ans
- ☐ 1. Two watt meter
  - ☐ 2. Single watt meter
  - ☐ 3. Three watt meter
  - ☒ 4. Volt meter and Ammeter

Question ID : 1841224653

Status : Answered

Chosen Option : 2

Q.45 Thevenin's equivalent circuit resembles a \_\_\_\_\_.

- Ans
- ☐ 1. Dependent voltage source
  - ☐ 2. Ideal voltage source
  - ☒ 3. Practical voltage source
  - ☐ 4. Variable voltage source

Question ID : 1841224650

Status : Answered

Chosen Option : 2

Q.46 Which type of excitation is used to measurement of wave length, spectrum speed and polarization?

- Ans
- ☐ 1. Mechanical
  - ☒ 2. Optic
  - ☐ 3. Biological
  - ☐ 4. Thermal

Question ID : 1841224696

Status : Answered

Chosen Option : 2

Q.47 How many timer interrupts are present in 8051 microcontroller?

- Ans
- ☐ 1. 1
  - ☐ 2. 3
  - ☐ 3. 4
  - ☒ 4. 2

Question ID : 1841224683

Status : Answered

Chosen Option : 3

Q.48 Which type of energy can be transfer by conduction, convection and radiation?

- Ans
- ☒ 1. Light
  - ☒ 2. Mechanical
  - ☒ 3. Electrical
  - ☒ 4. Heating

Question ID : 1841224686  
Status : Answered  
Chosen Option : 1

Q.49 Which of the following unit is not a part of DC derive?

- Ans
- ☒ 1. Field Supply Unit
  - ☒ 2. Speed Regulation unit
  - ☒ 3. Frequency control unit
  - ☒ 4. Dc supply unit

Question ID : 1841224701  
Status : Answered  
Chosen Option : 3

Q.50 Concentrated Solar Thermal systems has property of \_\_\_\_\_.

- Ans
- ☒ 1. Utilization of heat energy of solar
  - ☒ 2. Utilization of heat energy of solar to produce direct current
  - ☒ 3. Utilization of light energy of solar
  - ☒ 4. Utilization of light energy of solar to produce direct current

Question ID : 1841224665  
Status : Answered  
Chosen Option : 4

Q.51 Which of the following working circuit is not related to thermal power plant?

- Ans
- ☒ 1. Feed Water and Steam Circuit
  - ☒ 2. Dam and Reservoir Circuit
  - ☒ 3. Air and Gas Circuit
  - ☒ 4. Coal and Ash Circuit

Question ID : 1841224645  
Status : Answered  
Chosen Option : 2

**Q.52** Exciting current for DC generator is correctly described by the which of the following current?

- Ans
- ☒ 1. Current carried by the carbon brushes
  - ☒ 2. Current carried by the field winding
  - ☒ 3. Current carried by the commutator segment
  - ☒ 4. Current carried by the Armature winding

Question ID : 1841224655  
Status : Answered  
Chosen Option : 2

**Q.53** In dc distribution which parameter is considered for voltage drop in distribution line?

- Ans
- ☒ 1. Capacitance and inductance
  - ☒ 2. Resistance only
  - ☒ 3. Resistance and capacitance
  - ☒ 4. Resistance, inductance and capacitance

Question ID : 1841224675  
Status : Answered  
Chosen Option : 2

**Q.54** Light is a form of \_\_\_\_\_ radiated from a body and human eye is capable of receiving it.

- Ans
- ☒ 1. Electromechanical energy
  - ☒ 2. Electromagnetic energy
  - ☒ 3. Electrostatic energy
  - ☒ 4. Electrochemical energy

Question ID : 1841224710  
Status : Answered  
Chosen Option : 2

**Q.55** Which is defined as the ratio of initial illumination to the ultimate maintained illumination on the working plane?

- Ans
- ☒ 1. Absorption factor
  - ☒ 2. Waste light factor
  - ☒ 3. Depreciation factor
  - ☒ 4. Maintenance factor

Question ID : 1841224712  
Status : Answered  
Chosen Option : 4

**Q.56** Working principle of which type of analog instrument is based on hall effect?

- Ans**
- ☐ 1. AC volt meter
  - ☐ 2. Watt meter
  - ☒ 3. Flux meter
  - ☐ 4. Volt meter

Question ID : **1841224652**  
Status : **Answered**  
Chosen Option : **3**

**Q.57** Which of the following statement is wrong related to micro hydro power plants?

- Ans**
- ☒ 1. Energy expansion possible
  - ☐ 2. Environmental impact is minimal
  - ☐ 3. Possible to integration with the local power grid
  - ☐ 4. Cost effective energy solution

Question ID : **1841224664**  
Status : **Answered**  
Chosen Option : **1**

**Q.58** Which of the following safety tip is correct while working with or near electricity?

- Ans**
- ☐ 1. Use outlets or cords that have exposed wiring.
  - ☐ 2. Make sure that exposed receptacle boxes are made of conductive materials.
  - ☒ 3. Use extension cords or equipment that is rated for the level of amperage or wattage that you are using.
  - ☐ 4. Don't inspect portable cord-and-plug connected equipment, extension cords, power bars, and electrical fittings for damage or wear

Question ID : **1841224709**  
Status : **Answered**  
Chosen Option : **3**

**Q.59** Which part of a three phase induction motor is responsible for the production of a revolving magnetic field?

- Ans**
- ☐ 1. Rotor slots
  - ☒ 2. Stator
  - ☐ 3. Rotor
  - ☐ 4. Slip rings

Question ID : **1841224678**  
Status : **Answered**  
Chosen Option : **2**

Q.60 Which reactions can producing the combustible gas from biomass solid?

- Ans
- ✓ 1. Thermo chemical reaction
  - ✗ 2. Electro mechanical extraction
  - ✗ 3. Biological conversion
  - ✗ 4. Electro chemical reaction

Question ID : 1841224718  
Status : Answered  
Chosen Option : 3

Q.61 Which of the following is NOT considered in electromagnetics relay?

- Ans
- ✗ 1. Attracted Armature type relay
  - ✗ 2. Induction Cup type relay
  - ✓ 3. Phase comparators relay
  - ✗ 4. Balanced Beam type relay

Question ID : 1841224715  
Status : Answered  
Chosen Option : 3

Q.62 Which among the following is wrong feature of single phase induction motor?

- Ans
- ✗ 1. Cheaper
  - ✗ 2. Reliable
  - ✗ 3. Simple construction
  - ✓ 4. Self-start motor

Question ID : 1841224679  
Status : Answered  
Chosen Option : 4

Q.63 Which type of wind turbine operation is independent of wind direction?

- Ans
- ✗ 1. Indirect wind machine
  - ✓ 2. Vertical axis machine
  - ✗ 3. Horizontal axis machine
  - ✗ 4. Direct wind machine

Question ID : 1841224663  
Status : Answered  
Chosen Option : 2

Q.64 Reverse current braking is also known as \_\_\_\_\_.

- Ans
- ✓ 1. Plugging
  - ✗ 2. Field control method
  - ✗ 3. Opposite braking
  - ✗ 4. Minimizer

Question ID : 1841224702  
Status : Answered  
Chosen Option : 1

Q.65 The locomotive that uses both, fuel and electricity to run on the road is known as \_\_\_\_\_.

- Ans
- ✗ 1. CNG operated locomotive
  - ✓ 2. Hybrid electric vehicle
  - ✗ 3. Petrol engines locomotive
  - ✗ 4. Electric vehicle

Question ID : 1841224720  
Status : Answered  
Chosen Option : 2

Q.66 Which is not a type of energy audits?

- Ans
- ✗ 1. Target energy audits
  - ✓ 2. Short type energy audits
  - ✗ 3. Walk through energy audits
  - ✗ 4. Detailed energy audits

Question ID : 1841224689  
Status : Answered  
Chosen Option : 1

Q.67 Which type of turn on method is used to radiation intensity?

- Ans
- ✓ 1. Light triggering
  - ✗ 2. Gate triggering
  - ✗ 3. Forward voltage triggering
  - ✗ 4. Temperature triggering

Question ID : 1841224669  
Status : Answered  
Chosen Option : 4

Q.68 The largest solid angle subtended at the center of a sphere is:

- Ans
- ☒ 1.  $\pi/2$  steradians
  - ☒ 2.  $4\pi$  steradians
  - ☒ 3.  $2\pi$  steradians
  - ☒ 4.  $\pi$  steradians

Question ID : 1841224711

Status : Answered

Chosen Option : 2

Q.69 \_\_\_\_\_ is a process of operating machines and other industrial equipment with the help of digital logical programming and reducing human intervention in decision making and manual command process with the help of mechanized equipment.

- Ans
- ☒ 1. Industrial production
  - ☒ 2. Industrial technology growth
  - ☒ 3. Industrial automation
  - ☒ 4. Industrialization

Question ID : 1841224697

Status : Answered

Chosen Option : 3

Q.70 Which is end point of power system structure?

- Ans
- ☒ 1. Grid sub station
  - ☒ 2. Generating station
  - ☒ 3. Service mains
  - ☒ 4. Distribution line

Question ID : 1841224671

Status : Answered

Chosen Option : 3

Q.71 Which system of induction type energy meter consists of two electro-magnets?

- Ans
- ☒ 1. Driving System
  - ☒ 2. Registering System
  - ☒ 3. Braking System
  - ☒ 4. Moving System

Question ID : 1841224654

Status : Answered

Chosen Option : 1

**Q.72** Which of the following quantity or parameter of transformer can be found by conducting short circuit test alone?

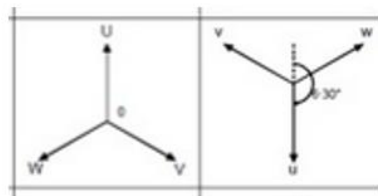
- Ans
- ☒ 1. Magnetizing current
  - ☒ 2. No load current
  - ☒ 3. No load resistance
  - ☒ 4. Equivalent reactance of transformer

Question ID : 1841224659

Status : Answered

Chosen Option : 4

**Q.73** Which vector group is represented by the following phase diagram of three phase transformer?



- Ans
- ☒ 1. Yy6
  - ☒ 2. Dy6
  - ☒ 3. Yy 0
  - ☒ 4. Yd 5

Question ID : 1841224661

Status : Answered

Chosen Option : 4

**Q.74** Which type of fractional motor offers precise control of angular positioning, acceleration and velocity?

- Ans
- ☒ 1. Stepper Motor
  - ☒ 2. Reluctance Motor
  - ☒ 3. Shaded-Pole Motor
  - ☒ 4. Servo motor

Question ID : 1841224682

Status : Answered

Chosen Option : 1

**Q.75** Which equipment is used for opening or closing a circuit under normal as well as abnormal (faulty) conditions in power system?

- Ans
- ☒ 1. Power transformer
  - ☒ 2. Circuit breaker
  - ☒ 3. Isolator
  - ☒ 4. Lightning arrester

Question ID : 1841224672

Status : Answered

Chosen Option : 2

**Q.76** Which type of protection is ensured by protective devices in electrical installation in buildings?

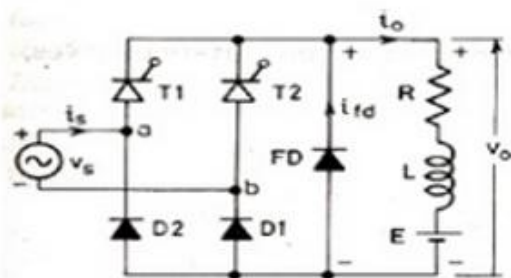
- Ans ☒ 1. High current protection
- ☒ 2. Light dim problem protection
- ☒ 3. Low current protection
- ☒ 4. Open circuit protection

Question ID : 1841224693

Status : Answered

Chosen Option : 1

**Q.77** Identify the following type of converter?



- Ans ☒ 1. Single phase full wave converter with RLE load
- ☒ 2. Single phase half wave circuit with RLE load
- ☒ 3. Single phase semi converter with RLE load
- ☒ 4. Single phase half wave circuit

Question ID : 1841224670

Status : Answered

Chosen Option : 2

**Q.78** In synchronous motor, inverted V graph can be obtained by variation between \_\_\_\_\_.

- Ans ☒ 1. Power factor and field current
- ☒ 2. Armature current and field current
- ☒ 3. Power factor and armature current
- ☒ 4. Armature voltage and field voltage

Question ID : 1841224681

Status : Answered

Chosen Option : 1

**Q.79** Which is wrong application of autotransformer?

**Ans** ✓ 1. Welding transformer

✗ 2. Induction motor starters

✗ 3.

To give small boost to a distribution cable to correct for the voltage drop

✗ 4. Furnace transformers

Question ID : 1841224660

Status : Answered

Chosen Option : 1

**Q.80** Which type of Arc flash personal protective equipment is correct if arc flash energy level is 25 cal/cm<sup>2</sup>?

**Ans** ✗ 1. Fire Resistant (FR) shirt and pants

✗ 2. Fire Resistant shirt and pants, cotton underwear

✓ 3. Two layers Fire Resistant clothing, cotton underwear

✗ 4. Non-melting or untreated natural fiber

Question ID : 1841224707

Status : Answered

Chosen Option : 3