

# Andhra Pradesh State Council of Higher Education

**Question Paper Name:** Electrical Engineering  
**Subject Name:** Electrical Engineering  
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**Total Marks:** 180  
**Display Marks:** Yes  
**Share Answer Key With Delivery Engine:** Yes

## Electrical Engineering

**Group Number :** 1  
**Group Id :** 62321765  
**Group Maximum Duration :** 0  
**Group Minimum Duration :** 180  
**Revisit allowed for view? :** No  
**Revisit allowed for edit? :** No  
**Break time:** 0  
**Group Marks:** 180  
**Revisit allowed for group Instructions? :** Yes  
**Maximum Instruction Time:** 0  
**Minimum Instruction Time:** 0

## Teaching and Research Aptitude

**Section Id :** 623217129  
**Section Number :** 1  
**Section type :** Online  
**Mandatory or Optional:** Mandatory  
**Number of Questions:** 82  
**Number of Questions to be attempted:** 82  
**Section Marks:** 90  
**Display Number Panel:** Yes  
**Group All Questions:** No

**Sub-Section Number:** 1  
**Sub-Section Id:** 623217385  
**Question Shuffling Allowed :** Yes

**Question Number : 1 Question Id : 62321711585 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**  
**Single Line Question Option : No Option Orientation : Vertical**

**Wrong Marks : 0**

Which of the following method of communication would be most effective in class room?

**Options :**

1. Lecture method
2. Interactive method
3. Multimedia method
4. Presenting written matter with the Lectures

Question Number : 2 Question Id : 62321711586 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Major objectives of teaching are

- a. to shape behaviour and conduct
- b. to improve learning skills of students.
- c. acquisition of knowledge.
- d. formation of belief.

Options :

1. (a) and (b)
2. (a), (b) and (c)
3. (a), (b), (c) and (d)
4. (a) and (c)

Question Number : 3 Question Id : 62321711587 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The field of Education is permeated by conflicts and misconception because

Options :

1. Problem in education call for subjectivity of interpretation.

2. Problems encountered in teaching are not amenable to rigorous scientific investigation.

3. There are not good teaching methods and procedures

4. Teachers are not worthy of doing rigorous scientific investigation.

Question Number : 4 Question Id : 62321711588 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The most appropriate meaning of learning is

Options :

1. gaining knowledge

2. modification of behaviour

3. personal adjustment

4. acquisition of skills

Question Number : 5 Question Id : 62321711589 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

In order to establish rapport with the students, the teacher should

Options :

1. Treat students as individuals

2. Try to avoid criticism

3. Learn and use student's names

4. All of the other options

Question Number : 6 Question Id : 62321711590 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Internal communication within institutions is done through

Options :

1. LAN
2. WAN
3. EBN
4. MMS

Question Number : 7 Question Id : 62321711591 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Meta cognition is related to

Options :

1. Assessment for learning
2. Assessment of learning
3. Assessment as learning
4. None of the other options

Question Number : 8 Question Id : 62321711592 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The two statements assertion and reasoning are given. Based on that choose correct answer.

Assertion (A) : Learning is a lifelong process

Reason (R) : Effective Learning takes place when it is linked with real life situations.

Options :

1. Both (A) and (R) are true and (R) is the correct explanation of (A)
2. Both (A) and (R) are true and (R) is not the correct explanation of (A)
3. (A) is true but (R) is false
4. (A) is false but (R) is true.

Question Number : 9 Question Id : 62321711593 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Talking and indiscipline in classroom is an indication of \_\_\_\_\_.

Options :

1. indisciplined students
2. boredom caused by repetitiveness
3. confusion about things taught
4. All of the other options

Question Number : 10 Question Id : 62321711594 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

In the process of conducting research,“formulation of hypothesis” is immediately followed by

Options :

1. Statement of objectives
2. Analysis of Data
3. Selection of research tools



## Collection of data

4.

Question Number : 11 Question Id : 62321711595 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

\_\_\_\_\_ is a preferred sampling method for the population in which the elements are more homogeneous within the group and heterogeneous between the groups

Options :

1. Systematic sampling
2. Purposive sampling
3. Cluster sampling
4. Stratified sampling

Question Number : 12 Question Id : 62321711596 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Which one is the purpose of theory building?

Options :

1. Applied research
2. Action research
3. Fundamental research
4. Survey research

Question Number : 13 Question Id : 62321711597 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Another term for the word “constructionism” is

Options :

1. Learning theory
2. objectivism
3. study of the building sector
4. research into construction studies

Question Number : 14 Question Id : 62321711598 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Wrong Marks : 0

The objectives of Historical research method is

Options :

1. to uncover the unknown
2. to answer particular questions
3. to seek implications or relationships of events from the past and their connections with the present
4. All of the other options

Question Number : 15 Question Id : 62321711599 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Wrong Marks : 0

What type of the interview, the questions are already prepared for data collection ?

Options :

1. Telephonic interview
2. Personal interview

3. Structured interview

4. All of the other options

Question Number : 16 Question Id : 62321711600 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

I C T includes

Options :

1. Online learning

2. Learning through the use of EDUSAT

3. Web based learning

4. All of the other options

Question Number : 17 Question Id : 62321711601 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

While constructing a questionnaire, it is important to do each of the following except \_\_\_\_\_

Options :

1. use “leading” or “loaded” questions

2. use simple language

3. understand your participants

4. pilot the test questionnaire

Question Number : 18 Question Id : 62321711602 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0



The introductory section of a research report should aim to \_\_\_\_\_

Options :

1. identify the specific focus of the study.
2. provide a rationale for the dissertation or article
3. grab the reader's attention
4. All of the other options

<b>Sub-Section Number:</b>	2
<b>Sub-Section Id:</b>	623217386
<b>Question Shuffling Allowed :</b>	Yes

**Question Id : 62321711603 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No**

**Question Numbers : (19 to 27)**

Question Label : Comprehension



## Read the following passage and answer the question :

It wasn't every day that Patricia Torres raced down the streets of Miami at 70 m.p.h. But then it wasn't every day that her daughter Nicole Cabezas hallucinated widely trying to jump out of the car, pulling off her clothes and ranting that people were following her, so this seemed like a pretty good time to hurry. Nicole, 16, had been having problems for a while now – ever since she was 14 – and began closeting herself in her bedroom, incapable of socializing or doing her school work, and contemplating suicide. The past few months had been different, though with the depression lifting and an odd state of high energy taking its place. Nicole's thoughts raced; her speech was fragmented. She went without sleep for days at a time and felt none the worse for it. She began to suspect that her friends were using her, but that was understandable, she guessed, since they no doubt envied her profound gifts "I was the center of the universe", she says quietly today "I was the chosen one". Finally, when the chosen one was struck by violent delusions – the belief that she had telekinetic powers that she could change the colors of objects at will – Torres decided it was time to take Nicole to the hospital. Emergency-room doctors took one look at the thrashing teenager, strapped her to a gurney and began administering sedatives. She spent two weeks in the hospital as the doctors monitored her shifting moods, adjusted her meds and talked to her and her parents about her descent into madness. Finally, she was released with a therapy plan and a cocktail of drugs. Six months later, doctors at last reached a diagnosis: she was suffering from bipolar disorder. While emotional turmoil is part of being a teenager, Nicole Cabezas is among a growing cohort of kids whose unsteady psyches do not simply rise and fall now and then but whipsaw violently from one extreme to another. Bipolar disorder – once known as manic depression, always known as a ferocious mental illness – seems to be showing up in children at an increasing rate, and that has taken a lot of mental-health professionals by surprise. The illness until recently, was thought of as the rare province of luckless adults – the overachieving businessman given to sullen lows and impulsive highs; the underachieving uncle with the mysterious moods and the drinking problem; the tireless supermom who suddenly takes to her room, pulls the shades and weeps in shadows for months at a time. But bipolar disorder isn't nearly so selective. As doctors look deeper into the condition and begin to understand its underlying causes, they are coming to the unsettling conclusion that a large number of teens and children are suffering from it as well. The National Depressive and Manic-Depressive Association gathered in Orlando, Fla, last week for its annual meeting, as doctors and therapists face a daunting task. Although the official tally of Americans suffering from bipolar disorder seems to be holding steady – at about 2.3 million, striking men and women equally – the average age of onset has fallen in a single generation from the early 30s to the late teens. And that number doesn't include kids under 18. Diagnosing the condition at very young ages is new and controversial, but experts estimate that an additional 1 million preteens and children in the U.S. may suffer from the early stages of bipolar disorder. Moreover, when adult bipolars are interviewed, nearly half report that their first manic episode occurred before age 21; 1 in 5 says it occurred in childhood. "We don't have the exact numbers yet, says Dr. Robert Hirschfeld, head of the psychiatry department of University of Texas in Galveston, "except he know it's there, and it's under diagnosed. "If he's right, it's an important warning sign for parents and doctors, since bipolar disorder is not an illness that can be allowed to go untreated. Victims have an alcoholism and drug-abuse rate triple that of the rest of the population and a suicide rate that may approach 20 per cent. They often suffer for a decade before their condition is diagnosed, and for years more before it is properly treated. "If you don't catch it early on", says Dr. Demetri Papolos, research director of the Juvenile Bipolar Research Foundation and co-author of *The Bipolar Child* (Broadway Books, 1999), "it gets worse, like a tumor". Heaping this torment on an adult is bad enough; loading it on a child is tragic.



**Sub questions**

**Question Number : 19 Question Id : 62321711604 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Wrong Marks : 0**

What prompted Nicole to act wildly and jump out of the car?

**Options :**

1. Nicole never wanted to be administered sedatives and therefore, she scuttled off to escape medication
2. Nicole was mentally retarded and therefore, she had to be kept under a strong vigil
3. Nicole, out of wild hallucination, had the habit of reckless running, which compelled her mother to chase her
4. Her hallucinations which put her in an odd state of high energy

**Question Number : 20 Question Id : 62321711605 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Wrong Marks : 0**

Which of the following sentence is true, according to the passage?

**Options :**

1. Patricia's fragmented speech was conceivable
2. Nicole suspected her friends of envying her gifts
3. Patricia had telekinetic powers, with which she could change the colors of objects at her will
4. Torres was suffering from a bipolar disorder

**Question Number : 21 Question Id : 62321711606 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Wrong Marks : 0**

Which of the following sentence is incorrect, as laid down in the passage?

**Options :**

1. Doctors took a little time to diagnose Nicole's condition
2. Bipolar disorder can be treated
3. Bipolar disorder took every health practitioner by surprise
4. The increasing rate of bipolar disorder in children has taken mental health professionals by surprise

Question Number : 22 Question Id : 62321711607 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Bipolar disorder seems to have affected \_\_\_\_\_.

Options :

1. Children
2. Adults
3. Children and Adults
4. Septuagenarians

Question Number : 23 Question Id : 62321711608 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Which of the following sentence is incorrect, according to the passage?

Options :

1. Bipolar disorder can affect any teenager
2. Victims of bipolar disorder are prone to alcoholism and drug abuse

3. Bipolar disorder is just manic depression and not a mental illness

4. Bipolar disorder is increasingly striking children

Question Number : 24 Question Id : 62321711609 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Which of the following sentence is incorrect, as per the passage?

Options :

1. Nicole was administered alkaloids as first aid, in hospital

2. It is tough to diagnose bipolar disorder in its nascent stage

3. Support of parents and relatives is a must to restore a patient's psychic equilibrium

4. Nicole was administered alkaloids as first aid, in hospital and support of parents and relatives is a must to restore a patient's psychic equilibrium

Question Number : 25 Question Id : 62321711610 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Why bipolar disorder considered to be serious?

Options :

1. Because the victims can change color at will

2. Because the victims are prone to violent delusions

3. Because mental health professionals could not conclude as to who could be a victim

4. As victims of bipolar disorders have a very high rate of alcoholism, drug abuse and suicide, it is a serious mental illness

Question Number : 26 Question Id : 62321711611 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0



Which of the following sentence can be inferred from the passage?

Options :

1. Since bipolar disorder is not considered to be a mental illness by the health practitioners, it should therefore be allowed to go untreated
2. Doctors are intrigued about the selective criteria of the disease
3. Impulsive gentlemen are more prone to bipolar disorders
4. The increasing rate at which bipolar disorder is afflicting young people is a cause for concern

Question Number : 27 Question Id : 62321711612 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The National Depressive and Manic-Depressive Association gather at \_\_\_\_\_.

Options :

1. Orlando
2. Texas
3. Miami
4. Broadway

Sub-Section Number:	3
Sub-Section Id:	623217387
Question Shuffling Allowed :	Yes

Question Number : 28 Question Id : 62321711613 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Identify the odd 'C' which is not relevant to the 7 C's of effective communication.

Options :

1. Clarity
2. Collaboration
3. Conciseness
4. Completeness

Question Number : 29 Question Id : 62321711614 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Wrong Marks : 0

The choice of communication partners is influenced by factors of \_\_\_\_\_

Options :

1. Proximity, utility, loneliness
2. Utility, Secrecy, dissonance
3. Secrecy, dissonance, deceptions
4. Dissimilarity, dissonance, deviance.

Question Number : 30 Question Id : 62321711615 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Wrong Marks : 0

The newspaper published by M.K. Gandhi when he was in South Africa was

Options :

1. Reformer
2. Harijan
3. My voice

4. Indian opinion

Question Number : 31 Question Id : 62321711616 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Wrong Marks : 0

\_\_\_\_\_ is an informal communication

Options :

1. News letter
2. Casual discussion
3. Interpersonal communication
4. Intrapersonal communication

Question Number : 32 Question Id : 62321711617 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Wrong Marks : 0

Human Communication is essentially

Options :

1. perfect
2. emotional
3. imperfect
4. short lived

Question Number : 33 Question Id : 62321711618 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Wrong Marks : 0

The term "SITE" stands for

Options :

1. Satellite Indian Television Experiment

2. Satellite International Television Experiment
3. Satellite Instructional Television Experiment
4. Satellite Instructional Teachers Education

Question Number : 34 Question Id : 62321711619 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Wrong Marks : 0

Which of these is not relevant to effective communication

- A. Clarity in language
- B. Listen poorly
- C. Home communication skills
- D. Adequate medium

Options :

1. Only A
2. Only B
3. Only B & C
4. Only A & D

Question Number : 35 Question Id : 62321711620 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Wrong Marks : 0

Orthoepy in communication means

Options :

1. pronunciation
2. expression



3. conversation

4. discussion

Question Number : 36 Question Id : 62321711621 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The two statements assertion and reasoning are given. Based on that choose correct answer.

Assertion (A): Nonverbal communication is related to expression of feelings, emotions in a wordless manner.

Reason (R): Body language is very much helpful in creating an understanding of any matter or feelings.

Options :

1. Both A and R are true, R is the correct explanation of A

2. Both A and R are true, R is not the correct explanation of A

3. A is true R is false.

4. A is false, R is true.

Question Number : 37 Question Id : 62321711622 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Two persons A, B are standing in a row along with  $n-2$  more persons. A is 15<sup>th</sup> person from the beginning while B is 19<sup>th</sup> person from the end. If there are exactly 4 persons between A and B, then a possible value of  $n$  is

Options :

1. 28

2. 30



3. 32

4. 36

Question Number : 38 Question Id : 62321711623 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The number that comes next in the following sequence is

1, 9, 36, 100, 225, 441, \_\_\_\_\_.

Options :

1. 684

2. 784

3. 787

4. 687

Question Number : 39 Question Id : 62321711624 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The letter that comes next in the following sequence is

B, C, E, G, K, M, \_\_\_\_\_.

Options :

1. N

2. O

3. P

4. Q

Question Number : 40 Question Id : 62321711625 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

If the words RING and FATE are coded as 57 and 38 respectively in a certain code, then in the same code the word PUSH is coded as

Options :

1. 45

2. 65

3. 85

4. 25

Question Number : 41 Question Id : 62321711626 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

$$\text{If } 4 + \frac{1}{5 + \frac{1}{8 + \frac{1}{10}}} = \frac{p}{q}, \text{ then } p + q =$$

Options :

1. 544

2. 454

3. 355

4. 535

Question Number : 42 Question Id : 62321711627 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

If p percent of q is q percent of p which is equivalent to x percent of pq, then x =

Options :

1. 4

2. 3

3. 2

4. 1

Question Number : 43 Question Id : 62321711628 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

By selling an article for ₹1,428, a dealer gets a profit of 20 percent. Then the cost price of that article in rupees is

Options :

1. 1,200

2. 1,190

3. 1,180

4. 1,210

Question Number : 44 Question Id : 62321711629 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

A person walks on one day with 60% of his usual speed and reaches his office 20 minutes late. Then the usual time he takes to reach his office, in minutes, is

Options :

1. 25

2. 45

3. 60

4. 30

Question Number : 45 Question Id : 62321711630 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

If  $a:b = \frac{4}{7}$  and  $b:c = \frac{9}{5}$ , then  $\frac{a+b}{b+c} =$

Options :

1.  $\frac{11}{14}$

2.  $\frac{36}{35}$

3.  $\frac{99}{98}$

4.  $\frac{77}{76}$

Sub-Section Number: 4  
Sub-Section Id: 623217388  
Question Shuffling Allowed : No

Question Number : 46 Question Id : 62321711631 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Surender is as much older than Kamal as he is younger than Prashant. Navin is as old as Kamal. Which of the following sentence is wrong?

Options :

1. Surender is older than Navin

2. Kamal is younger than Surender

3. Prashant is as old as Surender

Navin is younger than Prashant

4.

Question Number : 47 Question Id : 62321711632 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Find the odd one out.

Options :

1. DEHG

2. RSVU

3. JKNM

4. LMQP

Question Number : 48 Question Id : 62321711633 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Today is Thursday. The day after 59 days will be

Options :

1. Sunday

2. Monday

3. Tuesday

4. Wednesday

Question Number : 49 Question Id : 62321711634 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

“A” walks southwards then turns right then again turns left and then right. In which direction is he from the starting point?

Options :



1. South-West
2. South
3. West
4. North-West

Question Number : 50 Question Id : 62321711635 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Six persons are sitting in a circle facing the center of the circle. Parikh is between Babita and Narendra. Asha is between Chitra and Pankaj. Chitra is to the immediate left to Babita.

Who is to the immediate right to Babita?

Options :

1. Parikh
2. Pankaj
3. Narendra
4. Chitra

Question Number : 51 Question Id : 62321711636 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

In the following a statement and two conclusions are given. Read them and choose the correct answer.

Statement: Some books are tables. Some tables are mirrors.

Conclusions: I. Some mirrors are books

II. No book is mirror

Options :

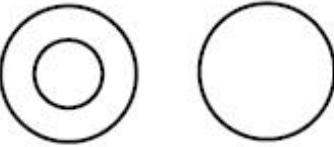
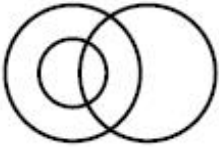
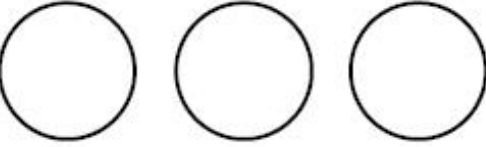

1. Only conclusion I follows
2. Only conclusion II follows
3. Neither I nor II follows
4. Both I and II follows

Question Number : 52 Question Id : 62321711637 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Wrong Marks : 0

The relationship among the following words represented by which diagram.

Doctors, Surgeons, Patients

Options :

1. 
2. 
3. 
4. 

Question Number : 53 Question Id : 62321711638 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Wrong Marks : 0

Pramana in Sanskrit means \_\_\_\_\_

Options :

1. Law

2. Proof

3. Unit

4. Dimension

Question Number : 54 Question Id : 62321711639 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

As per vedas philosophy, pramanas are \_\_\_\_\_ in number.

Options :

1. Four

2. Eight

3. Six

4. Two

Question Number : 55 Question Id : 62321711640 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Data which is generated within the company is classified as

Options :

1. Internal primary data

2. External primary data

3. Internal secondary data

4. External secondary data

Question Number : 56 Question Id : 62321711641 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The following table gives the number of students admitted in a college in the courses A, B, C, D, E during 2013-17. Based on this information answer the question given below.

Course \ Year	A	B	C	D	E
2013	221	232	314	282	143
2014	242	241	307	301	162
2015	254	263	315	314	188
2016	294	304	348	295	206
2017	261	315	318	305	212

The course that has registered highest growth percent in admissions in the year 2016 over its previous year is

Options :

1. A
2. B
3. C
4. E

Question Number : 57 Question Id : 62321711642 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The following table gives the number of students admitted in a college in the courses A, B, C, D, E during 2013-17. Based on this information answer the question given below.

<b>Course</b> <b>Year</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
2013	221	232	314	282	143
2014	242	241	307	301	162
2015	254	263	315	314	188
2016	294	304	348	295	206
2017	261	315	318	305	212

The year in which the admissions into 'course E' recorded highest growth percent increase over its previous year is

Options :

1. 2014
2. 2015
3. 2016
4. 2017

Question Number : 58 Question Id : 62321711643 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The following table gives the number of students admitted in a college in the courses A, B, C, D, E during 2013-17. Based on this information answer the question given below.

<b>Course</b> <b>Year</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
2013	221	232	314	282	143
2014	242	241	307	301	162
2015	254	263	315	314	188
2016	294	304	348	295	206
2017	261	315	318	305	212

The difference between the total number of admissions into courses A and C during the given period is

Options :



1. 370

2. 356

3. 332

4. 321

Question Number : 59 Question Id : 62321711644 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The following table gives the number of students admitted in a college in the courses A, B, C, D, E during 2013-17. Based on this information answer the question given below.

Course \ Year	A	B	C	D	E
2013	221	232	314	282	143
2014	242	241	307	301	162
2015	254	263	315	314	188
2016	294	304	348	295	206
2017	261	315	318	305	212

The increase in the total number of admission in the college in the given period is

Options :

1. 192

2. 204

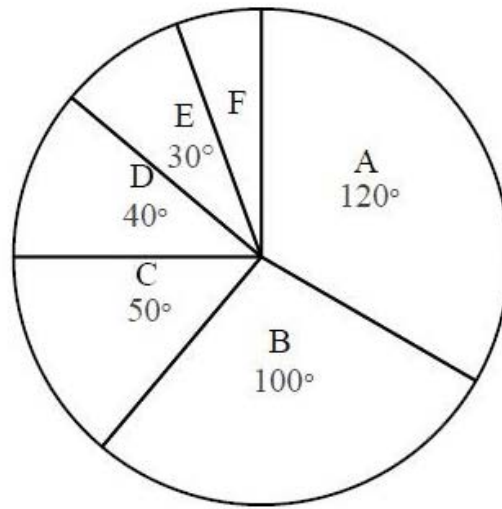
3. 212

4. 219

Question Number : 60 Question Id : 62321711645 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The following pie-chart gives the expenditure on various heads, (A) House rent, (B) Food, (C) Children education, (D) Cloths, (E) Entertainment and (F) Savings of a person out of his monthly income. Based on this information answer the question given below.



If the monthly income is ₹81,000, then the amount spent on food, in rupees, in that month is

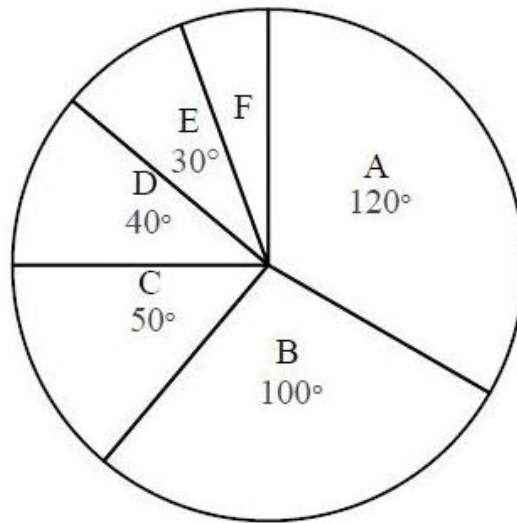
Options :

1. ₹25,000
2. ₹22,500
3. ₹20,000
4. ₹17,500

Question Number : 61 Question Id : 62321711646 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The following pie-chart gives the expenditure on various heads, (A) House rent, (B) Food, (C) Children education, (D) Cloths, (E) Entertainment and (F) Savings of a person out of his monthly income. Based on this information answer the question given below.



The savings of the person in a month is what percent of his monthly income?

Options :

1.  $4\frac{4}{9}$

2.  $4\frac{8}{9}$

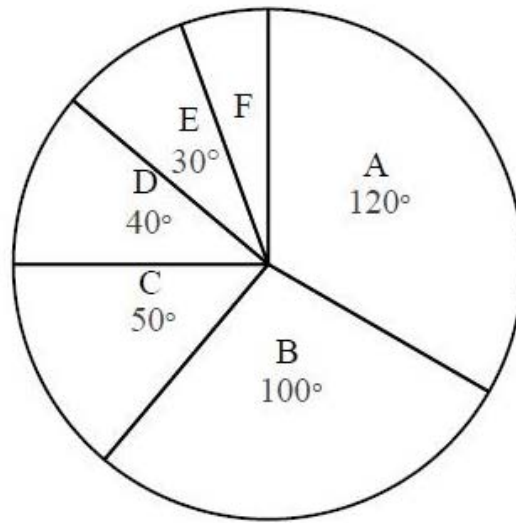
3.  $5\frac{5}{9}$

4.  $5\frac{8}{9}$

Question Number : 62 Question Id : 62321711647 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The following pie-chart gives the expenditure on various heads, (A) House rent, (B) Food, (C) Children education, (D) Cloths, (E) Entertainment and (F) Savings of a person out of his monthly income. Based on this information answer the question given below.



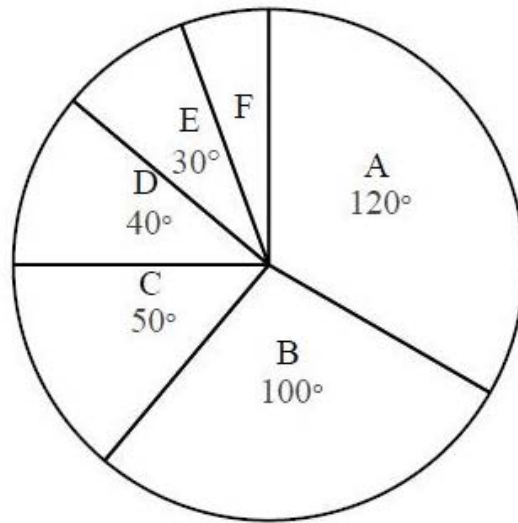
If the amount spent on cloths in a month is ₹19,800, then the amount spent on food in that month, in rupees, is

Options :

1. 21,000
2. 23,000
3. 24,000
4. 27,000

Question Number : 63 Question Id : 62321711648 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Wrong Marks : 0

The following pie-chart gives the expenditure on various heads, (A) House rent, (B) Food, (C) Children education, (D) Cloths, (E) Entertainment and (F) Savings of a person out of his monthly income. Based on this information answer the question given below.



The total amount spent on children education and cloths is what percent of the amount spent on house rent?

Options :

1. 25
2. 50
3. 75
4. 125

Sub-Section Number: 5  
Sub-Section Id: 623217389  
Question Shuffling Allowed : Yes

Question Number : 64 Question Id : 62321711649 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Magnetic disc is a medium known as

Options :

1. serial access



2. direct access
3. sequential access
4. sequential and rotational access

Question Number : 65 Question Id : 62321711650 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Wrong Marks : 0

Which of the following is not a language for computer programming?

Options :

1. PASCAL
2. BASIC
3. C++
4. Windows

Question Number : 66 Question Id : 62321711651 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Wrong Marks : 0

\_\_\_\_\_ bytes equal to one Tera byte.

Options :

1.  $10^{12}$
2.  $10^9$
3.  $10^6$
4. None of the other options

Question Number : 67 Question Id : 62321711652 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The full form of MAN is

Options :

1. Metropolitan Area Network
2. Many Aerial Network
3. Man And Network
4. Multy Area Network

Question Number : 68 Question Id : 62321711653 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Why are digital circuits are easier to design than analog circuits?

Options :

1. They do not control electricity precisely
2. All elements of digital circuits are from the same family
3. They are made in the form of ICs
4. They are smaller in size

Question Number : 69 Question Id : 62321711654 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The gray code for decimal 7 is

Options :

1. 0111
2. 1011

3. 0100

4. 0101

Question Number : 70 Question Id : 62321711655 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Which of the following is network security aspect?

Options :

1. Patch management

2. Firewalls

3. Instruction detection system

4. All of the other options

Question Number : 71 Question Id : 62321711656 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

NPTEL was initiated in the year

Options :

1. 2000

2. 2003

3. 2007

4. 2010

Question Number : 72 Question Id : 62321711657 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The full form of SWAYAM is

Options :

1. Study Webs of Active-learning for Young Aspiring Minds
2. Study World of Active-learning for Young Aspiring Minds
3. Society of Webs for Active-learning for Young Aspiring Minds
4. Study Webs of Activists on Young Aspiring Minds

Question Number : 73 Question Id : 62321711658 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Which of the following UN commissions is responsible for reviewing progress in the implementation of Agenda 21 and the Rio Declaration on Environment and Development.

Options :

1. United Nation Disarmament Commission
2. United Nations Statistical Commission
3. United Nations Commission on Sustainable Development
4. United Nations Commission on Human Rights.

Question Number : 74 Question Id : 62321711659 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Which of the following human activity, causes maximum environmental pollution, having regional and global impact is:

Options :

1. Urbanization
2. Industrialization
3. Agriculture

## Mining

4.

Question Number : 75 Question Id : 62321711660 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Which of the following is not related to the sources of air pollution?

Options :

1. Volcanic emissions

1.

2. Acid rains

2.

3. Fuel combustion in vehicular traffic

3.

4. Petroleum Refining

4.

Question Number : 76 Question Id : 62321711661 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Which of the following can be re-cycled many times ?

Options :

1. Aluminium

1.

2. Plastic

2.

3. Wood

3.

4. Organic material

4.

Question Number : 77 Question Id : 62321711662 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0



Depletion of ozone layer causes, which of the following?

- a. Cataract in eyes leading to blindness
- b. Reduced productivity of agriculture
- c. Lung infection

Options :

- 1. Only (a)
- 2. Only (a) and (b)
- 3. Only (c)
- 4. (a), (b) and (c)

Question Number : 78 Question Id : 62321711663 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

In hydroelectricity power

Options :

- 1. Kinetic energy is transferred to potential energy
- 2. Potential energy is transferred to kinetic energy
- 3. Solar energy is transferred to wind energy
- 4. Wind energy is transferred to solar energy.

Question Number : 79 Question Id : 62321711664 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

International Tsunami information center is located in

Options :

- 1. Goa

2. Jakarta

3. Puducherry

4. Honolulu

Question Number : 80 Question Id : 62321711665 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The Environment Protection Act, 1986 was enforced on

Options :

1. 19/11/1986

2. 20/11/1986

3. 23/5/1986

4. 19/6/1986

Question Number : 81 Question Id : 62321711666 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

When did the Kyoto protocol enter into force?

Options :

1. 1997

2. 2000

3. 2005

4. 2009

Question Number : 82 Question Id : 62321711667 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Which of these National Institutes is not associated with the Ministry of Ayush?

Options :

1. NIA
2. NIN
3. NIS
4. NIT

Question Number : 83 Question Id : 62321711668 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Name of the first University to Introduce Japanese language course in India.

Options :

1. Viswa - Bharati University
2. IISc
3. Jawaharlal Nehru University
4. Tata Institute of Social Science

Question Number : 84 Question Id : 62321711669 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Which of the following organizations deals with capacity building educational planning?

Options :

1. NCERT
2. UGC
3. NAAC

## 4. NUEPA

Question Number : 85 Question Id : 62321711670 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The accreditation process by National Assessment and Accreditation Council (NAAC) differs from that of National Board of Accreditation (NBA) in terms of \_\_\_\_\_.

Options :

1. Disciplines covered by both being the same, there is duplication of effort.
2. One is concerned with approval of minimum standards and the other in the quality of education.
3. One has institutional grading approach and the other has programme grading approach.
4. None of the other options

Question Number : 86 Question Id : 62321711671 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

NIOS is associated with which of these forms of learning

Options :

1. Progressive schooling
2. Open schooling
3. Conventional schooling
4. Home schooling

Question Number : 87 Question Id : 62321711672 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

What is the other name for Secondary Education Commission?

Options :



1. Mudaliar commission
2. Kothari commission
3. Radha Krishnan commission
4. None of the other options.

Question Number : 88 Question Id : 62321711673 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Which of the following is FALSE when it comes to the International programme called as the Common Wealth of Learning?

Options :

1. It operates in India
2. It is for open learning
3. It has headquarters in New Zealand
4. It is for distance learning.

Question Number : 89 Question Id : 62321711674 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

An elective course chosen generally from an unrelated subject with an intention to seek exposure is called

Options :

1. Additive
2. Additional
3. Generic Elective



# Supplement

4.

Question Number : 90 Question Id : 62321711675 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

According to which theory experimental knowledge is real?

Options :

1. Perennialism
2. Essentialism
3. Progressivism
4. Reconstructionism

## Electrical Engineering

Section Id :	623217130
Section Number :	2
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	90
Number of Questions to be attempted:	90
Section Marks:	90
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	623217390
Question Shuffling Allowed :	Yes

Question Number : 91 Question Id : 62321711676 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Maximum power transfer can be obtained between two cascaded sections of an electrical network under certain conditions. The relationship between the output impedance  $Z_1$  and the input impedance  $Z_2$  of the second section for maximum power transfer is given by

Options :

1.  $Z_2 = \text{complex conjugate of } Z_1$

2.  $Z_2 = -Z_1$

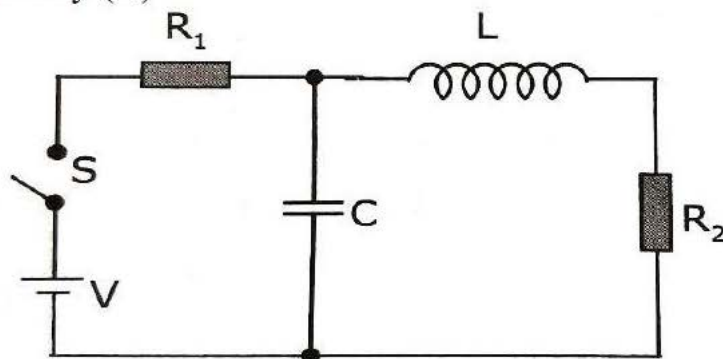
3.  $Z_2 = \text{real part of } Z_1$

4.  $Z_2 = \text{Negative of the complex conjugate of } Z_1$

Question Number : 92 Question Id : 62321711677 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

In a series RLC circuit the current varies when the frequency is varied from 0 to  $\infty$  (Zero to Infinity). For what frequencies ( $f$ ) will the circuit operate at lagging power factor with respect to the resonant frequency ( $f_0$ )



Options :

1.  $f = f_0$

2.  $f = 0$

3.  $f < f_0$

4.  $f > f_0$

Question Number : 93 Question Id : 62321711678 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Which variety of copper has the best conductivity?

Options :

1. Copper containing traces of silicon

2. Induction hardened copper

3. Hard drawn copper

4. Pure annealed copper

Question Number : 94 Question Id : 62321711679 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The graph of a network has N Nodes and B branches. The number of links L with respect to the choice of Trees is given by:

Options :

1.  $B-N+1$

2.  $B+N$

3.  $N-B+1$

4.  $N-2B-1$

Question Number : 95 Question Id : 62321711680 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

For a Balanced three phase circuit, the total power consumed is given in terms of the phase voltage and phase currents by:

Options :

1.  $V_L I_L \cos \phi$

2.  $3 V_L I_L \cos \phi$

3.  $2 V_L I_L \cos \phi$

4.  $\sqrt{3} V_L I_L \cos \phi$

Question Number : 96 Question Id : 62321711681 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

For a two port network to be reciprocal, the conditions to be satisfied are:

1. The transmission parameters  $A=D$
2. The impedances  $Z_{12}=Z_{21}$
3. The h parameters  $h_{12} = - h_{21}$

Options :

1. 1, 2 and 3 are correct
2. 1 and 2 are correct
3. 2 and 3 are correct
4. 1 and 3 are correct

Question Number : 97 Question Id : 62321711682 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The power consumed in AC circuit will be maximum when

Options :

1. Power factor is greater than 1
2. Power factor is equal to 1
3. Power factor is zero
4. Power factor is less than 1



Question Number : 98 Question Id : 62321711683 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The power consumed by 3 equal impedances are connected in star and then in delta across a Three phase supply. The power consumed by them is

Options :

1. Same in both the cases
2. The power consumed in star is more than the power consumed in Delta
3. The power consumed in star is less than the power consumed in Delta
4. None of the other options

Question Number : 99 Question Id : 62321711684 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Two infinite parallel metallic plates are charged with equal surface charge density of same polarity. The electric field in the gap between the plates is

Options :

1. Zero
2. Same as that produced by one plate
3. Double that produced by the single plate
4. Dependent on the position of the point

Question Number : 100 Question Id : 62321711685 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Identify the equation which represents the Gauss's Law.

Options :

1.  $\nabla \times H = J$

2.  $\nabla \times H = D$

3.  $\nabla J + \rho = 0$

4.  $\nabla E = \rho/\epsilon$

Question Number : 101 Question Id : 62321711686 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

If a dielectric is placed in an electric field , the electric field strength

Options :

1. Remains unaltered

2. Increases

3. Decreases

4. Becomes zero

Question Number : 102 Question Id : 62321711687 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Electric lines of force do not cross each other because

Options :

1. Tangent to the line of force gives direction of E and if they cross there will be two tangents for E which is not possible.

2. Lines of force emanate from charge

3. Lines of force mutually repel

4. None of the other options

Wrong Marks : 0

## The equipotential lines and the field lines

Options :

1. Are parallel
2. Are antiparallel
3. Are orthogonal
4. Have no definite relationship

Wrong Marks : 0

Consider a hollow and solid metal sphere , on these the charges reside on

Options :

1. The outer surface in hollow and throughout in solid
2. The outer surface in both
3. The outer surface in solid and throughout in hollow
4. None of the other options

Wrong Marks : 0

In a coaxial cable, the central conductor and the outer conductor carry equal currents in opposite direction. The magnetic field is zero

Options :

1. Outside the cable



2. Inside the inner conductor
3. Inside the outer conductor
4. In between the two

Question Number : 106 Question Id : 62321711691 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

A constant current “I” amps is maintained in a long solenoid. Which one of following quantities will get increased, if an iron rod is inserted in to the solenoid

Options :

1. Magnetic flux at center
2. Magnetic flux linked with solenoid
3. Self-inductance
4. All of the other options

Question Number : 107 Question Id : 62321711692 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

What will be the field at the center of a circular loop carrying a current?

Options :

1.  $\mu_0 I / 4R$
2.  $\mu_0 I / 2R$
3.  $\mu_0 I / R$
4.  $\mu_0 I$



Question Number : 108 Question Id : 62321711693 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

A magnetic dipole means

Options :

1. Two magnetic charges
2. A current loop
3. Two electric charges in magnetic field
4. Electric dipole

Question Number : 109 Question Id : 62321711694 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

For a periodic signal  $v(t) = 30 \sin(100t) + 10 \cos(300t) + 6 \sin\left(500t + \frac{\pi}{4}\right)$ , the fundamental frequency in radians/sec is

Options :

1. 100
2. 300
3. 500
4. 1500

Question Number : 110 Question Id : 62321711695 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The continuous signal  $x(t) = \sin \omega t$  is a periodic signal. However for its discrete counterpart  $x[n] = \sin \omega n$  to be periodic, the necessary condition is

Options :

1.  $0 \leq \omega \leq 2\pi$

2.  $2\pi/\omega$  to be an integer
3.  $2\pi/\omega$  to be a ratio of integers
4. None of the other options

Question Number : 111 Question Id : 62321711696 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
 Single Line Question Option : No Option Orientation : Vertical  
 Wrong Marks : 0

Response of a system to a complex input  $x(t) = e^{j4t}$  is specified as  $y(t) = \sin 4t$  then the system is

Options :

1. May be LTI ( Linear Time Invariant)
2. LTI
3. Not LTI
4. Not linear but time invariant

Question Number : 112 Question Id : 62321711697 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
 Single Line Question Option : No Option Orientation : Vertical  
 Wrong Marks : 0

The Fourier transform of a deterministic signal  $g(t)$  is  $G(f)$  then the Fourier transform of  $g(t-2)$  is

Options :

1.  $G(f)e^{-j4\pi t}$
2.  $G(2f)$
3.  $2G(2f)$

4.  $G(f-2)$

Question Number : 113 Question Id : 62321711698 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Determine the signal  $x(t)$  for which the Laplace transform  $X(s)$  is given by  $X(s) = (s+1)/(s^2+3s+2)$  and ROC is  $\text{Re}(s) \geq -2$

Options :

1.  $e^{2t}u(t)$

2.  $e^{-2t}u(t)$

3.  $e^{2t}$

4.  $e^{-2t}$

Question Number : 114 Question Id : 62321711699 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The region of convergence of the z-transform of the discrete time signal  $x[n] = 2^n u[n]$  will be

Options :

1.  $|z| > 2$

2.  $|z| < 2$

3.  $|z| > 1/2$

4.  $|z| < 1/2$

Question Number : 115 Question Id : 62321711700 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

An increase in the sampling rate can be realized by:

Options :

1. Interpolation
2. Extrapolation
3. Decimation
4. Aliasing

Question Number : 116 Question Id : 62321711701 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The Laplace transform of  $i(t)$  is given by  $I(s) = 2/s(1+s)$  as  $t \rightarrow \infty$ , the value of  $i(t)$  tends to

Options :

1. 0
2. 1
3. 2
4.  $\infty$

Question Number : 117 Question Id : 62321711702 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Which of the following statements is FALSE for a continuous time causal and stable LTI system

Options :

1. All the poles of the system must lie on the left half of the s-plane
2. Zeroes of the system can be anywhere on the s-plane
3. All the poles must lie within  $|s|=1$



All the roots of the characteristic equation must be located on the left half of s-plane

4.

Question Number : 118 Question Id : 62321711703 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Distributed Winding and Short chording of the armature windings in alternating current machines will lead to

Options :

1. Increase in emf and reduction in harmonics

1.

2. Reduction in emf and increase in harmonics

2.

3. Increase in both emf and harmonics

3.

4. Reduction in both emf and harmonics

4.

Question Number : 119 Question Id : 62321711704 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

An ideal transformer is defined as one which has

Options :

1. A common core for its primary and secondary windings

1.

2. Core of stainless steel and windings of pure copper

2.

3. No copper and iron losses and zero magnetic leakage

3.

4. The windings of the primary and secondary interleaved on a Laminated core

4.

Question Number : 120 Question Id : 62321711705 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

No load test on a transformer is conducted to determine

Options :

1. Core losses
2. Copper losses
3. Resistance losses
4. Both core and Copper losses

Question Number : 121 Question Id : 62321711706 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The reason for increase in the kVA rating of the autotransformer made by connecting Two winding transformer to form an autotransformer is:

Options :

1. Increase in turns ratio
2. Increase in secondary voltage
3. Increase in transformer efficiency
4. Establishment of both conductive link and inductive link between primary and secondary.

Question Number : 122 Question Id : 62321711707 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

What is the impact of increase in load current on the mutual flux linkage in a transformer

Options :

1. Increases
2. Decreases
3. Does not change

None of the other options

4.

Question Number : 123 Question Id : 62321711708 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The most important condition to be satisfied for parallel operation of single phase transformers is:

Options :

1. The ratio of equivalent reactance to equivalent resistance must be equal

2. They must be connected properly with respect to polarity.

3. Their per unit leakage impedances must be same.

4. None of the other options

Question Number : 124 Question Id : 62321711709 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The speed of a dc motor can be controlled by

Options :

1. Armature voltage control

2. Flux control

3. Field and armature resistance control

4. All of the other options

Question Number : 125 Question Id : 62321711710 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The rotor of a Three phase Induction motor cannot run at synchronous speed because:

Options :



1. Rotor torque would then become Zero
2. Lenz's law would be violated
3. Induction motor would become synchronous motor
4. The air friction does not allow the rotor to run at synchronous speed.

Question Number : 126 Question Id : 62321711711 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The torque developed by an Induction Motor depends on the following factors:

Options :

1. Slip, frequency and number of poles
2. Voltage, current and stator impedance
3. Synchronous speed, rotor speed and frequency
4. Rotor emf, rotor current and rotor power factor

Question Number : 127 Question Id : 62321711712 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Speed variation of a slip ring Induction motor can be done by:

Options :

1. Changing frequency
2. Changing the applied voltage
3. Cascading of Induction motor



4. All of the other options

Question Number : 128 Question Id : 62321711713 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Salient pole synchronous machines are not used for high speed turbo alternators because of:

Options :

1. Large eddy losses
2. High centrifugal forces and windage losses
3. Excessive bearing friction
4. Harmful mechanical oscillations.

Question Number : 129 Question Id : 62321711714 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

In a synchronous generator operating at zero power factor lagging, the effect of armature current reaction is

Options :

1. Magnetizing
2. Demagnetizing
3. Cross magnetizing
4. Both magnetizing and cross magnetizing

Question Number : 130 Question Id : 62321711715 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

In a split phase type Induction motor , the phase is \_\_\_\_\_

Options :

1. 30 degrees
2. 70 degrees
3. 90 degrees
4. 120 degrees

Question Number : 131 Question Id : 62321711716 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Wrong Marks : 0

For enhancing the power transmission in EHV transmission line, the acceptable practice is to connect:

Options :

1. Series inductive compensator in the line
2. Shunt inductive compensator in the line
3. Series capacitive compensator in the line
4. Shunt capacitive compensator at the sending end.

Question Number : 132 Question Id : 62321711717 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Wrong Marks : 0

The concept of short , medium and long transmission lines is based on the

Options :

1. Nominal voltage of the line
2. Physical length of the line
3. Wavelength of the line

## Power transmitted over the line

4.

Question Number : 133 Question Id : 62321711718 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

In a power system for symmetrical fault calculations

Options :

1. Only positive sequence network is enough
2. Only negative sequence network is enough
3. All the sequence networks are required
4. None of the other options

Question Number : 134 Question Id : 62321711719 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

A balanced 3 phase system is a special case of general three phase system in which

Options :

1. Zero and positive sequence components are zero
2. Zero and negative sequence components are zero
3. Positive and negative sequence components are zero
4. Only the Zero sequence components are zero

Question Number : 135 Question Id : 62321711720 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Zero sequence components of voltage are absent in

Options :



1. Delta connected system
2. Star connected system
3. Star connected system with neutral grounded
4. All of the other options

Question Number : 136 Question Id : 62321711721 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

An alternator having an induced emf of 1.6 pu is connected to an infinite bus of 1 pu. If the bus bar has a reactance of 0.6 pu and the alternator has a reactance of 0.2 pu . The maximum power that can be transferred is

Options :

1. 8 pu
2. 2 pu
3. 2.67 pu
4. 5 pu

Question Number : 137 Question Id : 62321711722 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The Gauss Seidel load flow method has the following disadvantages. Identify the one which is not correct

Options :

1. Unreliable convergence
2. Slow convergence



## Choice of slack bus affects convergence

3.

A good initial guess for voltages is essential for convergence

4.

Question Number : 138 Question Id : 62321711723 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

A power system consists of 300 buses out of which 20 buses are generator buses, 25 buses are the ones with reactive power support and 15 buses are the ones with fixed shunt capacitors. All the other buses are load buses. It is proposed to perform a load flow analysis for the system using Newton Raphson method. The size of the NR Jacobian Matrix with slack bus is:

Options :

1.  $553 \times 553$

1.

2.  $540 \times 540$

2.

3.  $555 \times 555$

3.

4.  $554 \times 554$

4.

Question Number : 139 Question Id : 62321711724 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Equal area criterion gives information regarding

Options :

1. Stability region

1.

2. Relative stability

2.

3. Absolute stability

3.

## Swing Curves

4.

Question Number : 140 Question Id : 62321711725 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Steady state power stability of a power system is improved by :

Options :

1. Reducing the fault clearing time

1.

2. Using the double circuit line instead of single circuit line

2.

3. Single pole switching

3.

4. Decreasing generator inertia

4.

Question Number : 141 Question Id : 62321711726 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

An over current relay of current rating 5 A and setting 150% is connected to the secondary of a CT of ratio 300:5 . Then the current in lines for which the relay picks up is :

Options :

1. 150 A

1.

2. 300 A

2.

3. 200 A

3.

4. 450 A

4.

Question Number : 142 Question Id : 62321711727 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The effect of feedback on a system are

- A. It increases speed of response of the system
- B. It allows accurate control of the output even when process parameters are not known accurately
- C. The controlled variable accurately follows the derived value.

Of the above the correct options are

Options :

- 1. A & B
- 2. B & C
- 3. A , B & C
- 4. None of the other options

Question Number : 143 Question Id : 62321711728 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Despite the presence of negative feedback, control systems still have problems of instability because the

Options :

- 1. Components used have nonlinearities
- 2. Dynamic equations of the subsystems are not known exactly
- 3. Mathematical analysis involves approximations
- 4. System has large negative phase angle at high frequencies

Question Number : 144 Question Id : 62321711729 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

A system has one pole at the origin, the impulse response of the system will be



Options :

1. Constant
2. Ramp
3. Decaying exponential
4. Oscillatory

Question Number : 145 Question Id : 62321711730 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

A second order system exhibits 100% overshoot on excitation. The damping coefficient of such a system is

Options :

1. Equal to ZERO
2. Equal to ONE
3. Less than ONE
4. Greater than ONE

Question Number : 146 Question Id : 62321711731 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

On computing the RH table if there are two sign changes in the first column ( positive to negative and negative to positive) then we can infer that

Options :

1. The system is stable
2. The system is partially stable



3. There are no roots in the right half plane.

4. The system is unstable with two poles in the right half of the s plane

Question Number : 147 Question Id : 62321711732 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

For a root locus, the breakaway points indicate that

Options :

1. The characteristic equation has multiple roots

2. The characteristic equation has one root

3. The asymptotes meet at that point

4. The root locus branch terminates on the real axis

Question Number : 148 Question Id : 62321711733 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Gain cross over frequency is the frequency at which the gain is \_\_\_\_\_ and the Phase cross over frequency is the frequency at which the phase margin is \_\_\_\_\_ degrees.

Options :

1. 0 , 0

2.  $\infty$ , 90

3. 1, 180

4. Any value, 360

Question Number : 149 Question Id : 62321711734 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

For a gain constant  $K$ , the phase lead compensator contributes to

Options :

1. Reduce the slope of the magnitude curve in the entire range of the frequency domain.
2. Decrease the gain cross over frequency
3. Reduce the phase margin
4. Reduce the resonance peak  $M_p$

Question Number : 150 Question Id : 62321711735 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

It is given that the lead compensator does the following:

- a. Increases the margin of stability
- b. Speeds up transient stability
- c. Does not affect the system error constant

Check and state which of the above statements are correct

Options :

1. b and c
2. a and b
3. a and c
4. a, b and c

Question Number : 151 Question Id : 62321711736 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The secondary of a CT should never be open circuited because

Options :

1. Heat dissipation in the core will be very large
2. The core will be completely saturated and permanently magnetized rendering it useless
3. Dangerously high emf will be induced in the secondary
4. All of the other options

Question Number : 152 Question Id : 62321711737 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The resolution of a digital ammeter with 3 digits of display is

Options :

1.  $\frac{1}{10000}$
2.  $\frac{1}{1000}$
3.  $\frac{1}{4}$
4.  $\frac{1}{3}$

Question Number : 153 Question Id : 62321711738 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The measurement of very low and very high frequency is usually done using a frequency counter or timer in the

Options :

1. Frequency measurement mode only



2. Period measurement mode only

3. Frequency and period measurement mode respectively

4. Period and frequency measurement mode respectively.

Question Number : 154 Question Id : 62321711739 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

A dual trace oscilloscope is set to operate in the alternate mode. The control input of the multiplexer used in the y-circuit is fed with a signal having a frequency equal to

Options :

1. The highest frequency that the multiplexer can operate

2. Twice the frequency of the time base (sweep) oscillator

3. The frequency of the time base (sweep) oscillator

4. Half the frequency of the time base (sweep) oscillator.

Question Number : 155 Question Id : 62321711740 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The simultaneous application of signals  $x(t)$  and  $y(t)$  to the horizontal and vertical plates respectively, of an oscilloscope produces a vertical figure of  $-8$  (Eight) on the display. If  $P$  and  $Q$  are constants and  $x(t) = P \sin(4t + 30)$  then  $y(t)$  is equal to \_\_\_\_\_

Options :

1.  $y(t) = Q \sin(4t - 30)$

2.  $y(t) = Q \sin(2t + 15)$



$$y(t) = Q \sin(8t + 60)$$

3.

$$y(t) = Q \sin(4t + 30)$$

4.

Question Number : 156 Question Id : 62321711741 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

A potentiometer is standardized for making it

Options :

1. Accurate

2. Precise

3. Accurate and direct reading

4. Accurate and Precise

Question Number : 157 Question Id : 62321711742 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

In a full wave rectifier using two ideal diodes  $V_{dc}$  and  $V_m$  are the dc and peak values of the voltages respectively across a resistive load. If the peak inverse voltage is denoted by PIV then the appropriate relationships for this rectifier are:

Options :

1.  $V_{dc} = V_m / \pi$  and  $PIV = 2V_m$

2.  $V_{dc} = 2V_m / \pi$  and  $PIV = 2V_m$

3.  $V_{dc} = 2V_m / \pi$  and  $PIV = V_m$

4.  $V_{dc} = V_m / \pi$  and  $PIV = V_m$

Question Number : 158 Question Id : 62321711743 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

A Bipolar Junction transistor operation in the linear region is possible when

Options :

1. B-E junction is forward biased
2. B-E junction is reverse biased
3. C-B junction is reverse biased
4. B-E junction is reverse biased and C-B junction is reverse biased

Question Number : 159 Question Id : 62321711744 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

In a transconductance amplifier, it is desirable to have

Options :

1. A large input resistance and a large output resistance
2. A large input resistance and a small output resistance
3. A small input resistance and a large output resistance
4. A small input resistance and a small output resistance

Question Number : 160 Question Id : 62321711745 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The 555 timer as astable multivibrator can be used as

Options :

1. A sinusoidal oscillator
2. A square wave oscillator

3. Both sinusoidal and square wave oscillator

4. None of the other options

Question Number : 161 Question Id : 62321711746 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

A master slave flip flop has the following characteristics

Options :

1. Change in the input is immediately reflected at the output

2. Change in the output occurs when the state of the master is affected

3. Change in the output occurs when the state of the slave is affected

4. Both the master and the slave states are affected at the same time

Question Number : 162 Question Id : 62321711747 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

What is the number of comparators required to have a 4 bit flash ADC?

Options :

1. 4

2. 5

3. 16

4. 15

Question Number : 163 Question Id : 62321711748 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0



A 8 bit microprocessor has an external RAM and the memory map is 8000H to 9FFFH .  
The number of bytes the RAM can store is

Options :

1. 8193
2. 8192
3. 8191
4. 8000

Question Number : 164 Question Id : 62321711749 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

A resistor is connected in between the gate and the cathode of an SCR, not increases its

Options :

1.  $dv/dt$
2. Holding current
3. Noise immunity
4. Turn off time

Question Number : 165 Question Id : 62321711750 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The following statements are with reference to a Power transistor and state which of them are correct.

- i. Forward base safe operating area decreases as pulse width is decreased (to base)
- ii. Reverse base safe operating area is greater than the forward base safe operating area
- iii. Secondary break down takes place only in power transistor.

Options :



1. i and iii
2. ii and iii
3. iii only
4. i, ii and iii

Question Number : 166 Question Id : 62321711751 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Wrong Marks : 0

Insulating layer of  $\text{SiO}_2$  is used in the MOSFET construction accounts for

- Options :
1. The very desirable high input impedance of the circuit
  2. Hardening the device
  3. Its cost effectiveness
  4. None of the other options

Question Number : 167 Question Id : 62321711752 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Wrong Marks : 0

In a Single phase semi converter , with discontinuous conduction and extinction angle  $\beta > \pi$ , the free wheeling diode conducts for

- Options :
1.  $\alpha$
  2.  $\beta - \pi$
  3.  $\pi - \alpha$

4.  $\beta$

Question Number : 168 Question Id : 62321711753 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

A single phase current source inverter has capacitor C as the load. For a constant source current, the voltage across the capacitor is

Options :

1. Square wave

2. Triangular wave

3. Step function

4. Pulsed wave

Question Number : 169 Question Id : 62321711754 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The output voltage of a three-phase square wave inverter contains

Options :

1. Only even harmonics

2. Both odd and even harmonics

3. Only odd harmonics

4. Only triple n harmonics

Question Number : 170 Question Id : 62321711755 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The forbidden energy gap between the valence band and conduction band will be least in case of

Options :

1. insulators

2. semiconductors

3. non metals

4. metals

Question Number : 171 Question Id : 62321711756 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Wrong Marks : 0

If the vector  $\begin{bmatrix} 1 \\ 2 \\ -1 \end{bmatrix}$  is an Eigen vector of  $A = \begin{bmatrix} -2 & 2 & -3 \\ 2 & 1 & -6 \\ -1 & -2 & 0 \end{bmatrix}$  then one of the Eigen value of  $A$  is \_\_\_\_\_.

Options :

1. 1

2. 2

3. 5

4. -1

Question Number : 172 Question Id : 62321711757 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Wrong Marks : 0

The function  $f(x) = |x + 1|$  on the interval  $[-2, 0]$  is \_\_\_\_\_.

Options :

1. Continuous and differentiable

2. Continuous but not differentiable

3. Differentiable but not continuous

4. Neither continuous nor differentiable

Question Number : 173 Question Id : 62321711758 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The line integral of  $\overline{F} = 2xi + x^2j$  along the  $x$ -axis from  $x = 1$  to  $x = 2$  is \_\_\_\_\_.

Options :

1. 3

2. 4

3. 5.33

4. 0

Question Number : 174 Question Id : 62321711759 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

If  $F(t)$  has a constant magnitude then \_\_\_\_\_.

Options :

1.  $F \cdot \frac{dF}{dt} = 0$

2.  $F \times \frac{dF}{dt} = 0$



$$F \cdot \frac{dF}{dt} \neq 0$$

3.

$$F \times \frac{dF}{dt} \neq 0$$

4.

Question Number : 175 Question Id : 62321711760 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

The solution of the PDE  $x \frac{\partial z}{\partial x} + y \frac{\partial z}{\partial y} = z$  is \_\_\_\_\_.

Options :

$$f(x, y) = 0$$

1.

$$f\left(\frac{x}{y}, \frac{y}{z}\right) = 0$$

2.

$$f(xy, yz) = 0$$

3.

$$f(x^2, y^2) = 0$$

4.

Question Number : 176 Question Id : 62321711761 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

Which of the following is an entire function?

Options :

1.  $z \bar{z}$

2.  $\frac{z}{1+z^2}$

3.  $e^{-z^2}$

4.  $e^{z^{-2}}$

Question Number : 177 Question Id : 62321711762 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

If  $f(z) = \frac{1}{(z-1)(z-3)}$  is expanded in a Taylor series in powers of  $(z-4)$  then the region of convergence is \_\_\_\_.

Options :

1.  $|z-1|=4$

2.  $|z-4|=1$

3.  $|z-4|<1$

4.  $|z-4|>1$

Question Number : 178 Question Id : 62321711763 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

A classroom of 20 students can be categorized on the basis of blood types. 5 students each with 'A', 'B', 'AB' and 'O' blood -types. If four students are selected at random from this class, what is the probability that each students has a different blood-type?

Options :

1. 0.2500

2. 0.1289

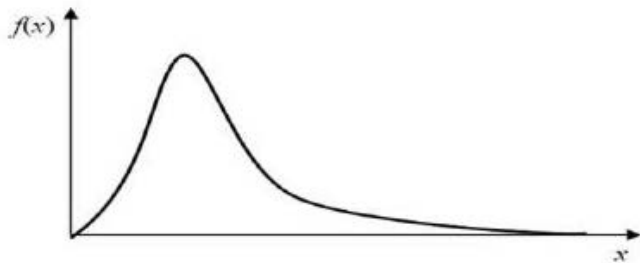
3. 0.0625

4. 0.0156

Question Number : 179 Question Id : 62321711764 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wrong Marks : 0

A probability distributions with right skew is shown in the figure,



the correct statement for the probability distribution is \_\_\_\_

Options :

1. mean is equal to mode

2. mean is greater than median but less than mode

3. mean is greater than median and mode

4. mode is greater than median

Wrong Marks : 0

If  $L\{F(t)\} = f(p)$  then  $L\{F'(t)\} = \underline{\hspace{2cm}}$ .

Options :

1.  $pf(p) + F(0)$

2.  $f(p) + pF(0)$

3.  $pf(p) - F(0)$

4.  $f(p) - pF(0)$