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Delhi Subordinate Services Selection Board
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Participant ID	
Participant Name	
Test Center Name	
Test Date	04/11/2019
Test Time	12:30 PM - 2:30 PM
Subject	ASSISTANT ENGINEER ELECTRICAL

Section : **Mental Ability**

Q.1 **If there are only 5 people between Arun and Soniya and Arun's rank is 17th from the left end and Soniya is 21st from the right end, Also soniya is ahead of Arun. What is the total strength of the class?**

Ans
✗ 1. 21
✗ 2. 35
✓ 3. 31
✗ 4. 42

Question ID : **54592776163**

Q.2 **Find the wrong term in the series?**

HEJ, KHM, NKM, QNS, TQV

Ans
✓ 1. NKM
✗ 2. QNS
✗ 3. TQV
✗ 4. HEJ

Question ID : **54592776155**

Q.3 **Find out the next term.**

P8O, R9Q, T10S, V11U, ?

Ans
✓ 1. X12W
✗ 2. W12W
✗ 3. X24W
✗ 4. X12U

Question ID : **54592776156**

Q.4 **Select the correct option that will fill in the blank and complete the series.**

78, 96, 108, 114, ?

Ans
✗ 1. 120
✗ 2. 125
✗ 3. 117
✓ 4. 114

Question ID : **54592776166**

Q.5 **In the following question, find the option figure in which the question figure is embedde.**

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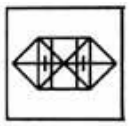
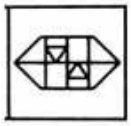
Question figure:

Ans

✔ 1. 

✘ 2. 

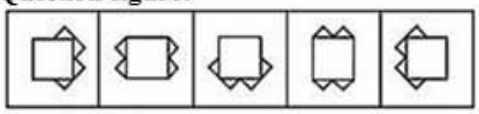
✘ 3. 

✘ 4. 

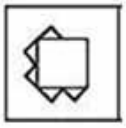
Question ID : **54592776174**

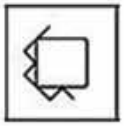
Q.6 **In this question given below which of the four option figures should come after the question figures, if the sequence were continued?**

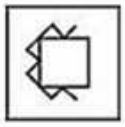
Question figure:

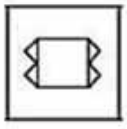


Ans

✘ 1. 

✘ 2. 

✘ 3. 

✔ 4. 

Question ID : **54592776170**

Q.7 **Select the related word pair from the given alternatives.**

West Bengal : Bengali :: ?

Ans

✘ 1. Gujarat : Hindi

✘ 2. Sikkim : Hindi

✔ 3. Tripura : Bengali

✘ 4. Mizoram : Kashi

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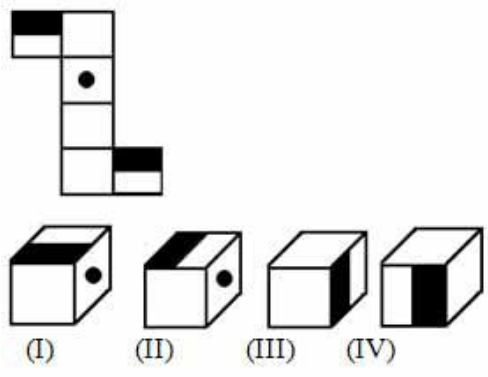
Question ID : **54592776159**

Q.8 **In the question below an unfolded dice is given and four answer choices are given in the form of complete dice. You are required to select the correct answer choice which is formed by folding the unfolded dice.**



Ans

✗ 1. I, II and III

✗ 2. II and III

✓ 3. I, II, III and IV

✗ 4. I and II

Question ID : **54592776173**

Q.9 **Select the related word from the given alternatives.**

BELARUS : MINSK :: IRAN : ?

Ans

✗ 1. Dublin

✓ 2. Tehran

✗ 3. Bissau

✗ 4. Baghdad

Question ID : **54592776158**

Q.10 **How many triangles are there in the following figure?**

Ans

✗ 1. 18

✓ 2. 23

✗ 3. 20

✗ 4. 30

Question ID : **54592776172**

Q.11 **In a certain code, the following language is used:**

"Some play like passion" is coded as "kij tpp fpp knc"
"Win requires Passion" is coded as "ktp mno fpp"
"Some play requires skills" is coded as "mno tpp knc bvc"

What does 'Like' means in the same coded language?

Ans

✓ 1. Kij

✗ 2. Mno

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✗ 3. Bvc

✗ 4. Tpp

Question ID : **54592776160**

Q.12 Select the wrong number in the given series.

68, 76, 58, 92, 28, 156

Ans

✗ 1. 92

✗ 2. 156

✗ 3. 76

✓ 4. 58

Question ID : **54592776167**

Q.13 Find the odd one out from the given alternatives.

Ans

✗ 1. Pleasure

✗ 2. Joy

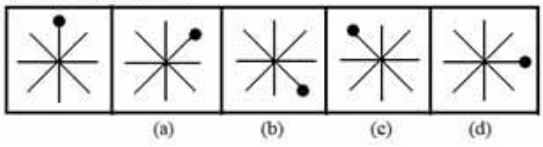
✗ 3. Gaiety

✓ 4. Murk

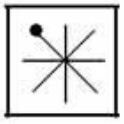
Question ID : **54592776157**

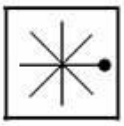
Q.14 The given series consist of five figures, the first one is unmarked. One of the four figures (a), (b), (c) and (d) does not fit into the series. Find out the figure.

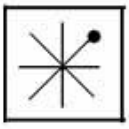
Question figure:

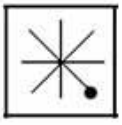


Ans

✓ 1. 

✗ 2. 

✗ 3. 

✗ 4. 

Question ID : **54592776171**

Q.15 In a super market vegetables potato, carrot, onions, tomato and brinjal are kept in five different vertical shelves. Two vegetables are kept between potatoes and carrots. Carrot is on the top shelf. Brinjal is above onions and tomatoes. Tomatoes are not kept on the 1st shelf.

Which vegetable is kept just above potatoes?

Ans

✗ 1. Brinjal

✗ 2. Onions

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✔ 3. Tomatoes

✘ 4. Carrot

Question ID : **54592776162**

Q.16 **For the Assertion (A) and Reason (R) given below, choose the correct alternative from the following:**

Assertion (A): India tested nuclear weapons for the first time in 1998.
Reason (R): The test of nuclear bomb was done at Pokhran.

Ans

✘ 1. Both (A) and (R) are true, but (R) is not the correct explanation of (A)

✘ 2. (A) is true, but (R) is false

✘ 3. Both (A) and (R) are true and (R) is the correct explanation of (A)

✔ 4. (A) is false, but (R) is true

Question ID : **54592776165**

Q.17 **There are 8 people T,R,S,Q,P,N,M and U having discussions around cricket world cup. From the given information you will have to identify their sitting places around the table. Two people sit between P and R. N, who is an immediate neighbor of P, is second to the left of Q. S sits opposite to T, who is second to the right of M and a neighbor of N.**

Who is sitting third to the left of Q?

Ans

✘ 1. N

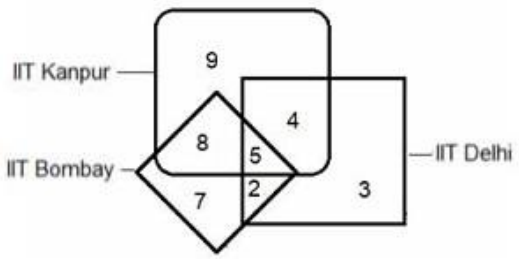
✘ 2. M

✔ 3. T

✘ 4. S

Question ID : **54592776161**

Q.18 **In the given figure, Which institution is /are represented by the number 2?**



Ans

✘ 1. IIT Delhi & IIT Kanpur & IIT Bombay

✔ 2. IIT Bombay & IIT Delhi

✘ 3. IIT Delhi & IIT Kanpur

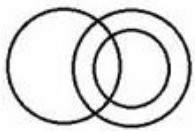
✘ 4. IIT Kanpur & IIT Bombay

Question ID : **54592776169**

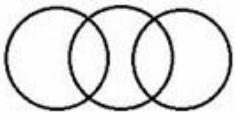
Q.19 **Which one of the following figures represents the relationship among Year, Month, and Seasons?**

Ans

✘ 1.



✘ 2.



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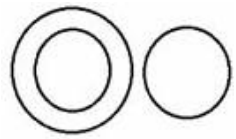
✗ 3. 

✓ 4. 

Question ID : **54592776168**

Q.20 **In the question below, there are three statements followed by two conclusions. You have to take the given statements to be true even if they seem to be at variance with commonly known facts and then decide which of the given conclusion logically follow(s) from the given statements.**

Statements:
Some books are rockets.
All rockets are clips.
Some clips are hard.

Conclusions:
I. Some books are clips.
II. Some rockets are hard.

Ans
✗ 1. If either conclusion I or II follows
✗ 2. If only conclusion II follows
✗ 3. If neither conclusion I nor II follows
✓ 4. If only conclusion I follows

Question ID : **54592776164**

Section : **General Awareness**

Q.1 **Hindi Divas is celebrated on _____.**

Ans
✓ 1. 14th Sept
✗ 2. 14th June
✗ 3. 26th July
✗ 4. 26th Nov

Question ID : **54592776188**

Q.2 **To be eligible for election as Vice-President, a person should have completed _____ years of age.**

Ans
✗ 1. 25
✗ 2. 30
✓ 3. 35
✗ 4. 40

Question ID : **54592776191**

Q.3 **Bitcoin, Ripple, Ethereum etc are examples of which of the following entities?**

Ans
✗ 1. Malware
✗ 2. Units of measurement
✗ 3. Drugs
✓ 4. Cryptocurrency

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Question ID : **54592776177**

Q.4 **Which of the following facts about Mahatma Gandhi is not correct?**

Ans
- ✔ 1. He took part in First Round table conference as a representative of INC
- ✘ 2. He wrote a literature 'Young India'
- ✘ 3. In 1918, Gandhiji was involved in two campaigns in Gujarat- Ahmedabad and Kheda
- ✘ 4. He formed All India anti untouchability league

Question ID : **54592776187**

Q.5 **State emergency can be declared under which article of Indian Constitution?**

Ans
- ✔ 1. Article 356
- ✘ 2. Article 352
- ✘ 3. All of the given options
- ✘ 4. Article 360

Question ID : **54592776192**

Q.6 **How many ports are there in India?**

Ans
- ✘ 1. 11
- ✘ 2. 15
- ✘ 3. 17
- ✔ 4. 12

Question ID : **54592776183**

Q.7 **Which of the following is not true for surcharge?**

Ans
- ✔ 1. It is mandatory for the Centre to share it with states
- ✘ 2. It goes to Consolidated fund of India
- ✘ 3. It is not earmarked for any specific purpose
- ✘ 4. It is a tax on tax as it is applied on payable tax

Question ID : **54592776178**

Q.8 **Which of the following embroidery is famous in Lucknow?**

Ans
- ✘ 1. Kantha
- ✘ 2. Zari
- ✔ 3. Chikankari
- ✘ 4. Phulkari

Question ID : **54592776175**

Q.9 **Anup Kumar is associated with which of the following sport?**

Ans
- ✘ 1. Shooting
- ✘ 2. Cricket
- ✘ 3. Wrestling
- ✔ 4. Kabaddi

Question ID : **54592776194**

Q.10 **Who holds the record for most Grand Slam men's singles Championships in Lawn Tennis?**

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Ans
✗ 1. Novak Djokovic
✗ 2. Rafael Nadal
✓ 3. Roger Federer
✗ 4. Kei Nishikori

Question ID : **54592776193**

Q.11 Which of the following is not an example of thorny vegetation?

Ans
✗ 1. Acacia
✗ 2. Cactus
✓ 3. Deodar
✗ 4. Palm

Question ID : **54592776182**

Q.12 Who was the chief guest of 70th Republic Day of India in 2019?

Ans
✗ 1. France President Emmanuel Macron
✓ 2. South Africa President Cyril Ramaphosa
✗ 3. Russian President Vladimir Putin
✗ 4. Sri Lankan President Maithripala Sirisena

Question ID : **54592776189**

Q.13 Which of the following states is the only one in India to have all the three species: Gharial, Mugger and saltwater crocodile?

Ans
✗ 1. Gujarat
✗ 2. West Bengal
✗ 3. Rajasthan
✓ 4. Odisha

Question ID : **54592776180**

Q.14 Which of the following river is not a tributary of Krishna river?

Ans
✗ 1. Bhima
✓ 2. Hemavati
✗ 3. Musi
✗ 4. Ghatprabha

Question ID : **54592776184**

Q.15 Mahayana Buddhism developed during the reign of which of the following Kings?

Ans
✓ 1. Kanishka
✗ 2. Harsha
✗ 3. Ajatshatru
✗ 4. Ashoka

Question ID : **54592776186**

Q.16 Which of the following is folk song from Arunanchal Pradesh?

Ans
✗ 1. Villu Pattu
✗ 2. Hekaileu

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3. Sohar

4. Nyioga

Question ID : **54592776176**

Q.17 Which of the following harmful materials are released by e-waste?

Ans

1. Mercury and Lead
2. Mercury
3. Lead
4. Iron

Question ID : **54592776179**

Q.18 Which of the following statements is not true for Agenda 21?

Ans

1. It is implemented by United Nations
2. It is product of Rio Earth summit
3. It is binding action plan
4. It is regarding sustainable development

Question ID : **54592776181**

Q.19 Sher Shah Sur defeated which of the following Mughal Emperor?

Ans

1. Humayun
2. Akbar
3. Babar
4. Aurangzeb

Question ID : **54592776185**

Q.20 Turing award is given in which field?

Ans

1. Mathematics
2. Computing
3. Marketing
4. Music

Question ID : **54592776190**

Section : **Arithmetic Ability**

Q.1 Pawan walks at a speed of 12km/h. After every km, he takes rest for 12 minutes. How much time will he take to cover 36 km distance.

Ans

1. 3 hrs
2. 7 hrs 12 minutes
3. 10 hrs
4. 10 hrs 12 minutes

Question ID : **54592776207**

Q.2 What should come in place of the question mark (?) in the following question?

$123^2 \times 2^3 + 65592 = ?^2$

Ans

1. 424

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✔ 2. 432

✘ 3. 412

✘ 4. 362

Question ID : **54592776195**

Q.3 **Simplify the following expression.**

$$\frac{48\times4+138}{12\times7.5+2.5\times8}=?$$

Ans

✔ 1. 3

✘ 2. 2.5

✘ 3. 2

✘ 4. 3.5

Question ID : **54592776196**

Q.4 **What is the area of the larger segment of a circle formed by a chord of length 5 cm subtending an angle of 90° at the centre?**

Ans

✔ 1. $\frac{25}{4}\left(\frac{3\pi}{2}+1\right)\text{cm}^2$

✘ 2. $\frac{25}{4}\left(\frac{\pi}{2}-1\right)\text{cm}^2$

✘ 3. $\frac{25}{4}\left(\frac{\pi}{4}-1\right)\text{cm}^2$

✘ 4. $\frac{25}{4}\left(\frac{\pi}{2}+1\right)\text{cm}^2$

Question ID : **54592776210**

Q.5 **If a sum is compounded half yearly at the rate of 7 percent per annum and the difference of compound interest and simple interest for 1 year is Rs. 98, then what will be the sum?**

Ans

✘ 1. Rs. 74,000

✔ 2. Rs. 80,000

✘ 3. Rs. 21,000

✘ 4. Rs. 28,000

Question ID : **54592776206**

Q.6 **The sum of two numbers is 4 and the reciprocal of one is thrice the reciprocal of second. What is the ratio of bigger and smaller number respectively?**

Ans

✔ 1. 3 : 1

✘ 2. 5 : 2

✘ 3. 2 : 2

✘ 4. 5 : 3

Question ID : **54592776204**

Q.7 **Simplify the following expression.**

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$\frac{4}{320} \times \frac{8}{38}\left\{\frac{144}{26} \times \frac{7}{8} \times \frac{104}{12} + 718\right\} = ?$

Ans
✗ 1. 4
✗ 2. 0.5
✓ 3. 2
✗ 4. 3

Question ID : **54592776197**

Q.8 **The percentage profit made when an article is sold for Rs. 56 is thrice as when it is sold for Rs. 42. The cost price of the article is:**

Ans
✗ 1. Rs. 25
✗ 2. Rs. 28
✗ 3. Rs. 49
✓ 4. Rs. 35

Question ID : **54592776203**

Q.9 **Ajay owns 83.33 percent of a property. Three fourth of the property he has is worth Rs. 5 Lakhs.Find the value of the whole property.(in Lakhs)**

Ans
✓ 1. 8
✗ 2. 6.4
✗ 3. 7.5
✗ 4. 8.8

Question ID : **54592776201**

Q.10 **The largest 4-digit number exactly divisible by both of 27 and 81 is:**

Ans
✗ 1. 9980
✓ 2. 9963
✗ 3. 9654
✗ 4. 9945

Question ID : **54592776198**

Q.11 **Two years ago the average age of a family of 5 members was 37.4 years.If a child is born in the family during this period, then the present average age of the family becomes 33 years. Find the present age of the child.**

Ans
✗ 1. 5 years
✗ 2. 6 years
✓ 3. 1 year
✗ 4. 2 years

Question ID : **54592776200**

Q.12 **If a : b = 3 : 2 and a = x + y and b = x - y, the value of x : y is:**

Ans
✓ 1. 5 : 1
✗ 2. 1 : 9
✗ 3. 9 : 1
✗ 4. 4 : 5

Question ID : **54592776205**

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Q.13 **456033 is divisible by which of the following number?**

Ans

✗ 1. 4

✗ 2. Both 4 and 8

✓ 3. 3

✗ 4. 8

Question ID : **54592776199**

Q.14 **If A had worked alone he would have taken 63 hours to do the task. What is B's share(in Rs.), if A and B work together on a task finishing it in 36 hours and they get paid Rs 5600 for it?**

Ans

✗ 1. 3600

✗ 2. 3400

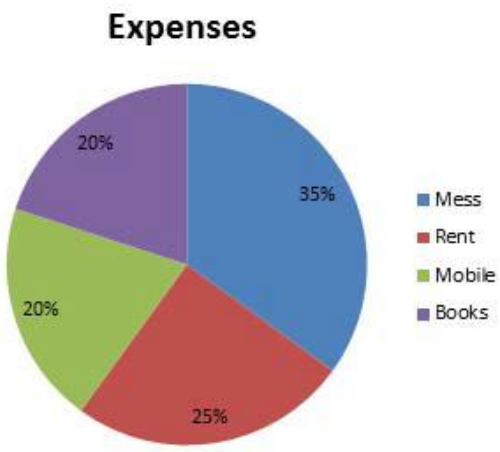
✗ 3. 2750

✓ 4. 2400

Question ID : **54592776209**

Q.15 **Study the following pie chart carefully to answer the question that follow.**

Monthly Expenses of a Student



Student's Expenses on Books is what percent more/less than his expenditure on rent?

Ans

✗ 1. 5 percent More

✗ 2. 20 percent More

✗ 3. 5 percent less

✓ 4. 20 percent less

Question ID : **54592776213**

Q.16 **Study the following graph carefully to answer the question that follow.**

Runs scored by Indian batsmen in three matches of a series

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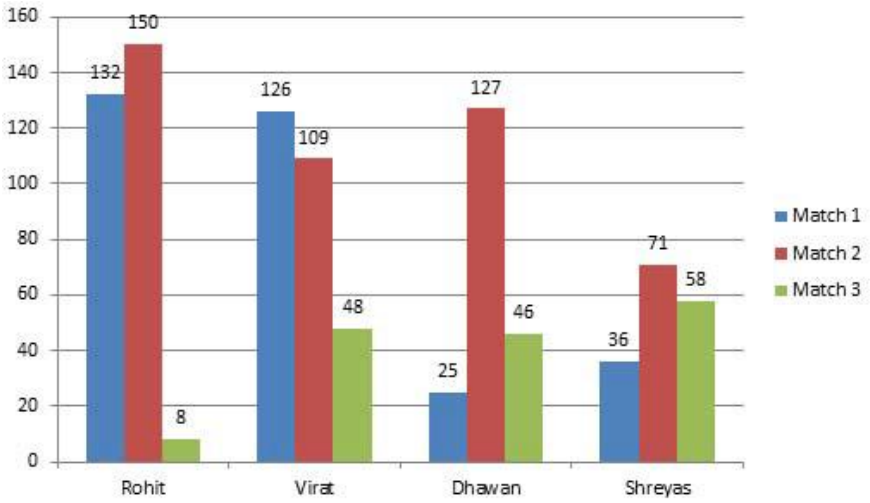

Rohit's score in Match 3 is what percent less than Virat's score in the same match ?

Ans

✗ 1. 20%

✗ 2. 80%

✓ 3. $83\frac{1}{3}\%$

✗ 4. $16\frac{1}{3}\%$

Question ID : **54592776214**

Q.17 In a test, the passing percentage was 35 percent. A student, who wrote it got 230 marks and failed by 15 marks. Find the maximum mark in the test.

Ans

✗ 1. 630

✗ 2. 770

✓ 3. 700

✗ 4. 840

Question ID : **54592776202**

Q.18 What is the area of a circle whose circumference is 88 cm?

Ans

✗ 1. 928 cm^2

✓ 2. 616 cm^2

✗ 3. 430 cm^2

✗ 4. 732 cm^2

Question ID : **54592776211**

Q.19 A train 280 meters long is moving at a speed of 60 km/hr. The time taken by the train to cross a platform 220 meters long is:

Ans

✗ 1. 35 second

✗ 2. 25 second

✗ 3. 20 second

✓ 4. 30 second

Question ID : **54592776208**

Q.20 What will be the area of the square whose diagonal length is $5\sqrt{2}$ cm.

Ans

✓ 1. 25 cm^2

✗ 2. 10 cm^2

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✗ 3. 100 cm^2

✗ 4. 50 cm^2

Question ID : **54592776212**

Section : **General English**

Q.1 **Identify the incorrect sentence or sentences.**

a. Subscribers offer publishers many benefits.
b. Most obvious is consistent stream of cash.
c. They enable a newspaper having a more predictable and a more efficient distribution system.
d. They also are the data for the advertising sales force.

Ans

✗ 1. a and b

✗ 2. Only d

✓ 3. b and c

✗ 4. Only b

Question ID : **54592776216**

Q.2 **What is the meaning of the idiomatic expression 'Between the devil and the deep blue sea'?**

Ans

✓ 1. Having only two very unpleasant choices

✗ 2. Having nightmares

✗ 3. Having dreams

✗ 4. Having only two very pleasant choices

Question ID : **54592776228**

Q.3 **Out of the four words given below, find the word which is an antonym of 'Mammoth'.**

Ans

✗ 1. Large

✓ 2. Tiny

✗ 3. Giant

✗ 4. Animal

Question ID : **54592776223**

Q.4 **What is the meaning of the idiomatic expression 'Goes without saying'?**

Ans

✗ 1. It should be considered impossible

✗ 2. It is beyond common understanding

✗ 3. It is paid for the extra hours you work

✓ 4. It should be generally understood or accepted

Question ID : **54592776227**

Q.5 **Select the most appropriate option to fill in the blank.**

I was terribly disappointed that they didn't let _____ take it into the hospital with me.

Ans

✗ 1. we

✗ 2. I

✗ 3. us

✓ 4. me

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Question ID : **54592776220**

Q.6 **What is the meaning of the suffix 'acy' in the word 'Democracy'?**

Ans
✗ 1. Having the quality of
✗ 2. Make or Become
✓ 3. Rule
✗ 4. Condition

Question ID : **54592776226**

Q.7 **Rearrange the following sentences in their correct order to form a meaningful paragraph.**

1. In the following question, there are six parts marked S1, S6, P, Q, R and S. The position of S1 and S6 is fixed. Some parts of the sentence have been jumbled up. Rearrange these parts and choose the proper sequence from the given options.

S1. A Swami Narayan sect priest has been attacked by two unidentified miscreants in a village.
P. The incident took place on Thursday night in a town called Raipur.
Q. The priest has been identified as Bhakti Prasad Swami.
R. After the attack, the miscreants left their car and fled.
S. When Bhakti was coming from a BJP election meeting, the assailants overtook his car and smashed the car's windshield and hit him with iron rods.
S6. The priest has been admitted to a hospital and a police complaint lodged.

Ans
✗ 1. PQSR
✓ 2. QPSR
✗ 3. QPRS
✗ 4. PQRS

Question ID : **54592776222**

Q.8 **Select the most appropriate option to fill in the blank.**

The students were polite and went easy on the coach who was _____ earlier this season.

Ans
✗ 1. sacks
✗ 2. sacking
✓ 3. sacked
✗ 4. sack

Question ID : **54592776219**

Q.9 **Out of the four words given below, find the word which is a synonym of 'Abandon'.**

Ans
✓ 1. Leave
✗ 2. Migrate
✗ 3. Accept
✗ 4. Agree

Question ID : **54592776224**

Q.10 **Out of the four words given below, find the word which is not correctly spelt.**

Ans
✗ 1. Privilege
✗ 2. Mischievous
✗ 3. Millennium
✓ 4. Miscellanious

Question ID : **54592776225**

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Q.11 Out of the four sentences given below, find the sentence which is grammatically correct?

Ans
✗ 1. Each boy and each teacher is required to bring their luggage
✗ 2. Each boy and each teacher are required to bring their luggage
✓ 3. Each boy and each teacher is required to bring his/her luggage
✗ 4. Each boy and each teacher are required to bring his luggage

Question ID : **54592776215**

Q.12 Find the word which can be replaced for the given sentence:

One who does a thing for pleasure and not as a profession.

Ans
✓ 1. Amateur
✗ 2. Professional
✗ 3. Unprofessional
✗ 4. Expert

Question ID : **54592776229**

Q.13 Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select option No substitution required.

Diet is among lifestyle changes urgently needed if developed nations <u>are to has hope</u> of meeting targets for reduced carbon emissions

Ans
✗ 1. No substitution required
✗ 2. are to has the hope
✗ 3. are wanting to hope
✓ 4. are to have a hope

Question ID : **54592776218**

Q.14 Rearrange the following sentences in their correct order to form a meaningful paragraph.

A. use the internet for accessing banking
B. A majority of Indians prefer to
C. than shopping online, shows a new survey
D. and other financial services

Ans
✗ 1. BACD
✗ 2. ADBC
✓ 3. BADC
✗ 4. BDAC

Question ID : **54592776221**

Q.15 Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select option No substitution required.

They wanted to see what Mr. Kennedy would choose, when faced with a choice <u>either</u> commerce and conservation.

Ans
✓ 1. between
✗ 2. among
✗ 3. with
✗ 4. No substitution required

Question ID : **54592776217**

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Comprehension:

Read the following passage carefully and answer the questions given below them.

The Rig Veda, which is the oldest work of the Aryans, gives a picture of an ancient civilisation, and explains how the mind of man, in its infancy, worships what is bright and glorious in nature, what is powerful and striking. Among some nations, religion began with the fear of diseases and evil but, among the Aryans, with the adoration of the glorious and powerful objects of nature, It, of course, also shows how the mind is led from nature up to nature's God, all natural phenomena being the action of the Unknowable One. It was the work of the rishis, who later passed from nature to nature's God. Vedic Dyu is simply the sky (literally meaning the shining); Dahana and Ahana, the dawn; Varuna (meaning to cover) is again the sky; Pramatha is fire produced by friction. The Vishnu of the Rig Veda is not the Vishnu, the preserver, but only the Sun God, far below Indra or Varuna, Savitri or Agni. It simply denotes the sun at its rise, its zenith and its setting. The Rudra of the Rig Veda is not the supreme destroyer but the thunder or thunder cloud. The Brahma of the Rig Veda is not the supreme creator but only prayer or god of prayer. There is no mention of the idols in the Rig Veda, none of the temples or places of worship where the people were to congregate. Every father of a family was his own priest and his home was his temple.

SubQuestion No : 16

Q.16 Which of the following statements is not true in the context of the passage?

Ans

✗ 1. Varuna, Savitri, Agni, Ahana and Dahan were known to the rishis

✗ 2. Dyu in the Vedas was the name of the sky

✗ 3. The thunder was known as Rudra

✓ 4. In Rig Veda, Vishnu was known as the preserver

Question ID : **54592776234**

Comprehension:

Read the following passage carefully and answer the questions given below them.

The Rig Veda, which is the oldest work of the Aryans, gives a picture of an ancient civilisation, and explains how the mind of man, in its infancy, worships what is bright and glorious in nature, what is powerful and striking. Among some nations, religion began with the fear of diseases and evil but, among the Aryans, with the adoration of the glorious and powerful objects of nature, It, of course, also shows how the mind is led from nature up to nature's God, all natural phenomena being the action of the Unknowable One. It was the work of the rishis, who later passed from nature to nature's God. Vedic Dyu is simply the sky (literally meaning the shining); Dahana and Ahana, the dawn; Varuna (meaning to cover) is again the sky; Pramatha is fire produced by friction. The Vishnu of the Rig Veda is not the Vishnu, the preserver, but only the Sun God, far below Indra or Varuna, Savitri or Agni. It simply denotes the sun at its rise, its zenith and its setting. The Rudra of the Rig Veda is not the supreme destroyer but the thunder or thunder cloud. The Brahma of the Rig Veda is not the supreme creator but only prayer or god of prayer. There is no mention of the idols in the Rig Veda, none of the temples or places of worship where the people were to congregate. Every father of a family was his own priest and his home was his temple.

SubQuestion No : 17

Q.17 'Pramatha' of the Vedas is:

Ans

✗ 1. Dawn

✗ 2. Sky

✗ 3. Thunder

✓ 4. Fire

Question ID : **54592776232**

Comprehension:

Read the following passage carefully and answer the questions given below them.

The Rig Veda, which is the oldest work of the Aryans, gives a picture of an ancient civilisation, and explains how the mind of man, in its infancy, worships what is bright and glorious in nature, what is powerful and striking. Among some nations, religion began with the fear of diseases and evil but, among the Aryans, with the adoration of the glorious and powerful objects of nature, It, of course, also shows how the mind is led from nature up to nature's God, all natural phenomena being the action of the Unknowable One. It was the work of the rishis, who later passed from nature to nature's God. Vedic Dyu is simply the sky (literally meaning the shining); Dahana and Ahana, the dawn; Varuna (meaning to cover) is again the sky; Pramatha is fire produced by friction. The Vishnu of the Rig Veda is not the Vishnu, the preserver, but only the Sun God, far below Indra or Varuna, Savitri or Agni. It simply denotes the sun at its rise, its zenith and its setting. The Rudra of the Rig Veda is not the supreme destroyer but the thunder or thunder cloud. The Brahma of the Rig Veda is not the supreme creator but only prayer or god of prayer. There is no mention of the idols in the Rig Veda,

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none of the temples or places of worship where the people were to congregate. Every father of a family was his own priest and his home was his temple.

SubQuestion No : 18

Q.18 Which of the following is a pair of names expressing two different aspects of the same deity?

Ans

✔ 1. Vishnu and Sun God

✘ 2. Brahma and Rudra

✘ 3. Indra and Varuna

✘ 4. Savitri and Agni

Question ID : **54592776235**

Comprehension:

Read the following passage carefully and answer the questions given below them.

The Rig Veda, which is the oldest work of the Aryans, gives a picture of an ancient civilisation, and explains how the mind of man, in its infancy, worships what is bright and glorious in nature, what is powerful and striking. Among some nations, religion began with the fear of diseases and evil but, among the Aryans, with the adoration of the glorious and powerful objects of nature, It, of course, also shows how the mind is led from nature up to nature's God, all natural phenomena being the action of the Unknowable One. It was the work of the rishis, who later passed from nature to nature's God. Vedic Dyu is simply the sky (literally meaning the shining); Dahana and Ahana, the dawn; Varuna (meaning to cover) is again the sky; Pramatha is fire produced by friction. The Vishnu of the Rig Veda is not the Vishnu, the preserver, but only the Sun God, far below Indra or Varuna, Savitri or Agni. It simply denotes the sun at its rise, its zenith and its setting. The Rudra of the Rig Veda is not the supreme destroyer but the thunder or thunder cloud. The Brahma of the Rig Veda is not the supreme creator but only prayer or god of prayer. There is no mention of the idols in the Rig Veda, none of the temples or places of worship where the people were to congregate. Every father of a family was his own priest and his home was his temple.

SubQuestion No : 19

Q.19 What is the basis for saying that there were no places of worship in Rig Vedic times?

Ans

✘ 1. Vedic Aryans were worshippers of nature

✘ 2. People did not worship any gods in Vedic times

✘ 3. The Rig Veda talks of idols.

✔ 4. There is no mention of any place of worship in the Rig Veda

Question ID : **54592776233**

Comprehension:

Read the following passage carefully and answer the questions given below them.

The Rig Veda, which is the oldest work of the Aryans, gives a picture of an ancient civilisation, and explains how the mind of man, in its infancy, worships what is bright and glorious in nature, what is powerful and striking. Among some nations, religion began with the fear of diseases and evil but, among the Aryans, with the adoration of the glorious and powerful objects of nature, It, of course, also shows how the mind is led from nature up to nature's God, all natural phenomena being the action of the Unknowable One. It was the work of the rishis, who later passed from nature to nature's God. Vedic Dyu is simply the sky (literally meaning the shining); Dahana and Ahana, the dawn; Varuna (meaning to cover) is again the sky; Pramatha is fire produced by friction. The Vishnu of the Rig Veda is not the Vishnu, the preserver, but only the Sun God, far below Indra or Varuna, Savitri or Agni. It simply denotes the sun at its rise, its zenith and its setting. The Rudra of the Rig Veda is not the supreme destroyer but the thunder or thunder cloud. The Brahma of the Rig Veda is not the supreme creator but only prayer or god of prayer. There is no mention of the idols in the Rig Veda, none of the temples or places of worship where the people were to congregate. Every father of a family was his own priest and his home was his temple.

SubQuestion No : 20

Q.20 According to the passage, who among Vishnu, Varuna, Savitri, Indra and Agni is considered least important In the Rig Veda?

Ans

✘ 1. Indra

✘ 2. Varuna

✘ 3. Savitri

✔ 4. Vishnu

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Question ID : **54592776231**

Section : **General Hindi**

Q.1 दिए गए विकल्पों मे से कौन-सा एकवचन है?

Ans
✗ 1. प्रियजन
✗ 2. अध्यापक वर्ग
✓ 3. प्रत्येक
✗ 4. पुरूष जाति

Question ID : **54592776244**

Q.2 वाक्य प्रकार का चयन कीजिए।

चाहे रात बीत जाए, मुझे यह कार्य पूरा करना है।

Ans
✗ 1. संयुक्त वाक्य
✗ 2. निषेधवाचक वाक्य
✗ 3. सरल वाक्य
✓ 4. मिश्र वाक्य

Question ID : **54592776245**

Q.3 मुहावरा 'इन तिलों में तेल नहीं' का अर्थ है-

Ans
✗ 1. उम्र बीत जाना
✓ 2. किसी भी लाभ की आशा न करना
✗ 3. नष्ट - भ्रष्ट कर देना
✗ 4. नियम के विरूद्ध कार्य करना

Question ID : **54592776247**

Q.4 दिए गए विकल्पों मे से किस वाक्य में विराम-चिन्हों का गलत प्रयोग किया गया है?

Ans
✗ 1. तीनों भाई सुन्दर,सुशील,दयालु और सबल थे।
✗ 2. बेरोजगार इधर-उधर भटकते रहते है।
✗ 3. वह अनवरत (लगातार) कार्य करता रहता है।
✓ 4. विषय आठ दिनों की छुट्टी हेतु।

Question ID : **54592776250**

Q.5 'आलोकधन्वा' में कौन-सा समास है?

Ans
✗ 1. द्विगु समास
✗ 2. द्वन्द्व समास
✓ 3. बहुव्रीहि समास
✗ 4. तत्पुरूष समास

Question ID : **54592776237**

Q.6 'कुलदीप' का विलोम शब्द है-

Ans
✓ 1. कुलांगर
✗ 2. आगत
✗ 3. वज्र

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✗ 4. विकीर्ण

Question ID : **54592776239**

Q.7 'सरस्वती' का पर्यायवाची शब्द है-

Ans
✗ 1. नाहर
✗ 2. वारीश
✗ 3. दिव
✓ 4. भारती

Question ID : **54592776240**

Q.8 वाक्य प्रकार का चयन कीजिए।

'लड़की चित्र बनाती है।'

Ans
✓ 1. कर्तृवाच्य
✗ 2. अकर्तृवाच्य
✗ 3. भाववाच्य
✗ 4. कर्मवाच्य

Question ID : **54592776243**

Q.9 लोकोक्ति 'जहाँ देखे तवा परात, वहाँ गाए सारी रात' का अर्थ है-

Ans
✓ 1. लालच में कोई काम करना
✗ 2. चटोरा होना
✗ 3. दोषी भी हो और घुड़की भी दे
✗ 4. छोटे लोगो का बढ़-चढ़कर बोलना

Question ID : **54592776249**

Q.10 शब्द-युग्म के सही अर्थ-भेद का चयन कीजिए।

'प्रदीप-प्रतीप'

Ans
✗ 1. रोशनी-दीपक
✗ 2. उल्टा-दीपक
✓ 3. दीपक-उल्टा
✗ 4. नाम-रोशनी

Question ID : **54592776242**

Q.11 निम्नलिखित में से कौन-सा, तद्भव शब्द है?

Ans
✓ 1. प्यास
✗ 2. मुख
✗ 3. वचन
✗ 4. भिक्षा

Question ID : **54592776238**

Q.12 किस चिन्ह का प्रयोग संवाद लेखन, एकांकी-लेखन या नाटक-लेखन में वक्ता के नाम के बाद किया जाता है?

Ans
✗ 1. लोप चिन्ह
✗ 2. विस्मयादिबोधक चिन्ह

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✔ 3. अपूर्ण विराम चिन्ह

✘ 4. पूर्णविराम चिन्ह

Question ID : **54592776248**

Q.13 **दिए गए वाक्य के लिए एक शब्द का चयन कीजिए।**

'किसी वस्तु या बात के विषय में जानने की प्रबल इच्छा'

Ans

✘ 1. क्षुधातुर

✘ 2. औतूहल

✘ 3. द्विज

✔ 4. जिज्ञासा

Question ID : **54592776241**

Q.14 **पुल्लिंग शब्द का चयन कीजिए।**

Ans

✔ 1. लेन-देन

✘ 2. सिलाई

✘ 3. लिखावट

✘ 4. बनावट

Question ID : **54592776246**

Q.15 **'धर्माधिकारी' में कौन-सी संधि है?**

Ans

✘ 1. यण संधि

✘ 2. अयादि संधि

✘ 3. विसर्ग संधि

✔ 4. दीर्घ संधि

Question ID : **54592776236**

Comprehension:

दिए गए गद्यांश का ध्यानपूर्वक अध्ययन कर प्रश्नों का उत्तर दीजिए।

स्वच्छ भारत अभियान भारत सरकार द्वारा आरंभ किया गया राष्ट्रीय स्तर का अभियान है जिसका उद्देश्य गलियों, सड़कों तथा अधोसंरचना को साफ-सुथरा करना और कूढा साफ रखना है। यह अभियान 02 अक्टूबर, 2014 को आरंभ किया गया। राष्ट्रपिता महात्मा गाँधी ने देश को गुलामी से मुक्त कराया, परन्तु 'स्वच्छ भारत' का उनका सपना पूरा नहीं हुआ। महात्मा गांधी ने अपने आसपास के लोगों को स्वच्छता बनाए रखने संबंधी शिक्षा प्रदान कर राष्ट्र को एक उत्कृष्ट संदेश दिया था।
आधिकारिक रूप से 1 अप्रैल 1999 से शुरू, भारत सरकार ने व्यापक ग्रामीण स्वच्छता कार्यक्रम का पुनर्गठन किया और पूर्ण स्वच्छता अभियान (टीएससी) शुरू किया जिसको बाद में (1 अप्रैल 2012 को) प्रधानमंत्री मनमोहन सिंह द्वारा निर्मल भारत अभियान (एनबीए) नाम दिया गया। स्वच्छ भारत अभियान के रूप में 24 सितंबर 2014 को केंद्रीय मंत्रिमंडल की मंजूरी से निर्मल भारत अभियान का पुनर्गठन किया गया था।
'निर्मल भारत अभियान' (1999 से 2012 तक पूर्ण स्वच्छता अभियान, या टीएससी) भारत सरकार द्वारा शुरू की गई समुदाय की अगुवाई वाली पूर्ण स्वच्छता (सीएलटीएस) के सिद्धांतों के तहत एक कार्यक्रम था। इस स्थिति को हासिल करने वाले गांवों को निर्मल ग्राम पुरस्कार नामक कार्यक्रम के तहत मौद्रिक पुरस्कार और उच्च प्रचार प्राप्त हुआ।

SubQuestion No : 16

Q.16 **उपरोक्त गद्यांश का उचित शीर्षक है-**

Ans

✔ 1. स्वच्छ भारत अभियान

✘ 2. महात्मा गाँधी का जन्म दिवस

✘ 3. अहिंसा दिवस

✘ 4. पूर्ण स्वच्छता अभियान

Question ID : **54592776252**

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Comprehension:

दिए गए गद्यांश का ध्यानपूर्वक अध्ययन कर प्रश्नों का उत्तर दीजिए।

स्वच्छ भारत अभियान भारत सरकार द्वारा आरंभ किया गया राष्ट्रीय स्तर का अभियान है जिसका उद्देश्य गलियों, सड़कों तथा अधोसंरचना को साफ-सुथरा करना और कूढा साफ रखना है। यह अभियान 02 अक्टूबर, 2014 को आरंभ किया गया। राष्ट्रपिता महात्मा गाँधी ने देश को गुलामी से मुक्त कराया, परन्तु 'स्वच्छ भारत' का उनका सपना पूरा नहीं हुआ। महात्मा गांधी ने अपने आसपास के लोगों को स्वच्छता बनाए रखने संबंधी शिक्षा प्रदान कर राष्ट्र को एक उत्कृष्ट संदेश दिया था।
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SubQuestion No : 17

Q.17 उपर्युक्त गद्यांश के संदर्भ में TSC का पूर्ण रूप है:

Ans

✗ 1. टोटल सर्वीसिस कैंपेन

✓ 2. टोटल सैनिटेशन कैंपेन

✗ 3. टोटल सर्विस कैम्प

✗ 4. ट्राई सर्विस सेन्टर

Question ID : **54592776256**

Comprehension:

दिए गए गद्यांश का ध्यानपूर्वक अध्ययन कर प्रश्नों का उत्तर दीजिए।

स्वच्छ भारत अभियान भारत सरकार द्वारा आरंभ किया गया राष्ट्रीय स्तर का अभियान है जिसका उद्देश्य गलियों, सड़कों तथा अधोसंरचना को साफ-सुथरा करना और कूढा साफ रखना है। यह अभियान 02 अक्टूबर, 2014 को आरंभ किया गया। राष्ट्रपिता महात्मा गाँधी ने देश को गुलामी से मुक्त कराया, परन्तु 'स्वच्छ भारत' का उनका सपना पूरा नहीं हुआ। महात्मा गांधी ने अपने आसपास के लोगों को स्वच्छता बनाए रखने संबंधी शिक्षा प्रदान कर राष्ट्र को एक उत्कृष्ट संदेश दिया था।
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SubQuestion No : 18

Q.18 स्वच्छ भारत अभियान, भारत सरकार द्वारा कब आरंभ किया गया था?

Ans

✗ 1. 1 अप्रैल, 2012

✓ 2. 02 अक्टूबर, 2014

✗ 3. 24 सितंबर, 2014

✗ 4. 2 अक्टूबर, 2019

Question ID : **54592776254**

Comprehension:

दिए गए गद्यांश का ध्यानपूर्वक अध्ययन कर प्रश्नों का उत्तर दीजिए।

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हासिल करने वाले गांवों को निर्मल ग्राम पुरस्कार नामक कार्यक्रम के तहत मौद्रिक पुरस्कार और उच्च प्रचार प्राप्त हुआ।

SubQuestion No : 19

Q.19 उपरोक्त गद्यांश के अनुसार स्वच्छ भारत अभियान के रूप में 24 सितंबर 2014 को केंद्रीय मंत्रिमंडल की मंजूरी से किस योजना का पुनर्गठन किया गया था?

Ans
✔ 1. निर्मल भारत अभियान
✘ 2. स्वच्छ भारत अभियान
✘ 3. निर्मल ग्रामीण स्वच्छ अभियान
✘ 4. राष्ट्रीय निर्मल सुरक्षा योजना

Question ID : **54592776253**

Comprehension:

दिए गए गद्यांश का ध्यानपूर्वक अध्ययन कर प्रश्नों का उत्तर दीजिए।

स्वच्छ भारत अभियान भारत सरकार द्वारा आरंभ किया गया राष्ट्रीय स्तर का अभियान है जिसका उद्देश्य गलियों, सड़कों तथा अधोसंरचना को साफ-सुथरा करना और कूढा साफ रखना है। यह अभियान 02 अक्टूबर, 2014 को आरंभ किया गया। राष्ट्रपिता महात्मा गाँधी ने देश को गुलामी से मुक्त कराया, परन्तु 'स्वच्छ भारत' का उनका सपना पूरा नहीं हुआ। महात्मा गांधी ने अपने आसपास के लोगों को स्वच्छता बनाए रखने संबंधी शिक्षा प्रदान कर राष्ट्र को एक उत्कृष्ट संदेश दिया था।
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SubQuestion No : 20

Q.20 उपरोक्त गद्यांश के अनुसार आधिकारिक रूप से, भारत सरकार ने व्यापक ग्रामीण स्वच्छता कार्यक्रम का पुनर्गठन कब से शुरू किया था?

Ans
✘ 1. 2 अक्टूबर, 2014
✔ 2. 1 अप्रैल, 1999
✘ 3. 24 सितंबर, 2014
✘ 4. 2 अक्टूबर, 2019

Question ID : **54592776255**

Section : **Discipline1**

Q.1 The relative permittivity is the least among the following for:

Ans
✘ 1. paper
✘ 2. Air
✘ 3. Glass
✔ 4. vacuum

Question ID : **54592776257**

Q.2 A three phase 415V, 20KW motor draw line current of 39A.What will be the phase current if the winding is delta connected.

Ans
✘ 1. 48.2A
✔ 2. 22.6A
✘ 3. 39A
✘ 4. 13A

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Question ID : **54592776259**

Q.3 A ring shaped coil with fixed number of turns, is carrying a current of certain magnitude. If an iron core is threaded into the coil without any change in coil dimensions, the magnetic induction density will:

Ans
✗ 1. Remains same
✗ 2. Unpredictable
✓ 3. Increase
✗ 4. Decrease

Question ID : **54592776264**

Q.4 In spherical coordinate, we have $\vec{D} = \frac{2\theta}{\pi r^2}(1 - cos6r)\hat{a}_r$, the charge density is _____.

Ans
✓ 1. $\frac{12\theta}{\pi r^2}$ sin6r
✗ 2. $\frac{4\theta}{\pi r^2}$
✗ 3. zero
✗ 4. $\frac{\theta}{\pi r^2}$ sin6r

Question ID : **54592776268**

Q.5 Given $\vec{A} = xz\,\widehat{a_x} + y^2\,\widehat{a_y} + xz\widehat{a_z}$ then $|\nabla \times \vec{A}|$ at the point (0,1,2) is:

Ans
✗ 1. 4
✗ 2. 2
✓ 3. 1.41
✗ 4. 1.60

Question ID : **54592776272**

Q.6 Race around condition occurs in:

Ans
✗ 1. Multiplexer
✗ 2. ROM
✗ 3. Voltage regulator
✓ 4. Flip-Flops

Question ID : **54592776269**

Q.7 A circuit consists of 120Ω resistor in parallel with a 40μF capacitor having 80Ω capacitive reactance. The current is:

Ans
✗ 1. No current will flow
✓ 2. Capacitive in nature
✗ 3. Inductive in nature
✗ 4. Resistive in nature

Question ID : **54592776260**

Q.8 A Full wave controlled converter is supplied by a 3-φ transformer. The load is inductive in nature and rating of load is Vo = 500 dc, power = 10KW. If the firing angle of converter is 30 degree, then the rating of the transformer is _____.

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Ans
✔ 1. 12.09 kVA
✘ 2. 12.11 kVA
✘ 3. 12.10 kVA
✘ 4. 12.12 kVA

Question ID : **54592776265**

Q.9 The potential difference across and current in a circuit are represented by (100+j200)V and (10+j5)A. The active power will be:

Ans
✘ 1. 100W
✘ 2. 20W
✘ 3. 200W
✔ 4. 2000W

Question ID : **54592776261**

Q.10 Which of the following is a Vector quantity?

Ans
✘ 1. Susceptibility.
✘ 2. Magnetic Potential.
✔ 3. Magnetic field intensity.
✘ 4. Magnetic flux density.

Question ID : **54592776262**

Q.11 By using only n number of NOR gates, the AND function can be realized. Then n = ?

Ans
✔ 1. 3
✘ 2. 2
✘ 3. 4
✘ 4. 5

Question ID : **54592776273**

Q.12 The magnetic reluctance of a magnetic circuit decreases with the:

Ans
✘ 1. Decrease in cross-sectional area
✘ 2. Decrease in relative permeability of the magnetic material of the circuit
✔ 3. Increase in cross-sectional area
✘ 4. Increase in length of magnetic path

Question ID : **54592776263**

Q.13 In a synchronous generator, at what value of δ (in degree) maximum power is generated.

Ans
✘ 1. 60
✘ 2. 45
✔ 3. 90
✘ 4. zero

Question ID : **54592776274**

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Q.14 On performing load test on 3-φ induction motor by two-wattmeter method , 16kW and -4kW are the reading obtained from two-wattmeter method and the line voltage is 400V.The line current is _____ .

Ans
✔ 1. 53A
✘ 2. 76A
✘ 3. 65A
✘ 4. 50A

Question ID : **54592776271**

Q.15 The state transition matrix of a control system is given by, $\begin{bmatrix} Ae^{-5t} - 4 & B \\ 0 & C^2e^{-8t} \end{bmatrix}$ (where A, B and C are constants). The maximum value of A+B+C is _____?

Ans
✘ 1. 4
✔ 2. 6
✘ 3. 8
✘ 4. 5

Question ID : **54592776266**

Q.16 A coil having a resistance of 6Ω and an inductance of 0.03H, is connected across a 50V, 60Hz supply. The current will be _____.

Ans
✘ 1. 4.9A
✔ 2. 3.9A
✘ 3. 4.5A
✘ 4. 3A

Question ID : **54592776258**

Q.17 When a source is delivering maximum power to a load , the efficiency of the circuit is always:

Ans
✔ 1. 50%
✘ 2. depends on circuit parameters.
✘ 3. 100%
✘ 4. 75%

Question ID : **54592776270**

Q.18 The developed torque depends upon which factor in an electromechanical energy conversion devices?

Ans
✘ 1. stator field and rotor field strengths
✔ 2. torque angle and the stator and rotor field strength
✘ 3. torque angle and stator field strength
✘ 4. stator field strength only

Question ID : **54592776267**

Q.19 A Transformer has its maximum efficiency of 0.97 at 50KVA at upf. During the day it is loaded as follows:
12 hours: 2kW at pf 0.75 lag
6 hours: 10 kW at pf 0.8 lag
6 hours: 15kW at pf 0.9 lag
Considering constant iron loss = 100W.
'All day efficiency of the transformer ' in percent will be _____.

Ans
✘ 1. 96.80%
✔ 2. 98.9%

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3. 96.77%
4. 96.30%

Question ID : **54592776275**

Q.20 In a closed loop control system:

Ans
1. control action depends on output.
2. no feedback is employed
3. output is independent by the control action.
4. output is independent by the effect of input.

Question ID : **54592776276**

Section : **Discipline2**

Q.1 Two conducting spherical shells have radii of a = 3cm and b = 5cm. The interior is perfect dielectric for which $\varepsilon_r = 7$. The capacitance C is _____ .

Ans
1. 36.50 pF
2. 58.4 pF
3. 37.08 pF
4. 49 pF

Question ID : **54592776280**

Q.2 A 3-φ, salient pole synchronous generator is delivering a power of 1p.u to an infinite bus at rated voltage and 0.7pf lagging .The generator has X d =0.8 and X q = 0.4. The power angle of the generator will be _____ degree.

Ans
1. 24.91
2. 32.8
3. 0
4. 15.79

Question ID : **54592776282**

Q.3 In a given system, the damping coefficient is -4. The system response will be:

Ans
1. Un damped
2. Oscillation with decreasing magnitude
3. Critically damped
4. Oscillation with increasing magnitude

Question ID : **54592776284**

Q.4 Compensator transfer function is given by,

$\frac{3S+9}{S+6}$ The maximum phase lead in degree is _____.

Ans
1. 26°
2. 18.45°
3. 15.9°

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✔ 4. 19.47°

Question ID : **54592776278**

Q.5 The errors introduced by an instrument fall in category _____.

Ans
✘ 1. Environmental error
✘ 2. Gross error
✔ 3. Systematic error
✘ 4. Random error

Question ID : **54592776294**

Q.6 Divergence of a vector is _____.

Ans
✘ 1. zero
✘ 2. constant
✘ 3. vector
✔ 4. scalar

Question ID : **54592776296**

Q.7 Superposition theorem is not applicable for:

Ans
✘ 1. bilateral elements
✔ 2. power calculation
✘ 3. passive elements
✘ 4. voltage calculation

Question ID : **54592776286**

Q.8 In type -2 system, ramp input is applied, the steady state error is:

Ans
✔ 1. zero
✘ 2. infinity
✘ 3. Negative constant
✘ 4. Positive constant

Question ID : **54592776295**

Q.9 The Gauss law is applicable for which of the following :

Ans
✘ 1. dynamic field
✔ 2. static field
✘ 3. time varying as well as static field
✘ 4. time invariant as well as static field

Question ID : **54592776291**

Q.10 Operational amplifier has virtual ground property which indicates that,

Ans
✘ 1. system is at rest

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✗ 2.
inverting and non inverting terminals are connected to ground

✓ 3.
inverting and non inverting terminals are at the same potential

✗ 4. any one terminal is connected to ground.

Question ID : **54592776281**

Q.11 Which one of the following decides the time of response of an indicating instrument?

Ans
✗ 1. Jewel and Pivot bearing
✗ 2. Deflecting system
✓ 3. Damping system
✗ 4. Controlling system

Question ID : **54592776279**

Q.12 Skewing is done in _____ part of induction motor.

Ans
✗ 1. stator
✗ 2. conductor
✗ 3. pole shoe
✓ 4. rotor bar

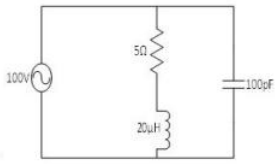
Question ID : **54592776283**

Q.13 A divide-by 6 counter is obtained by using:

Ans
✗ 1. 6-bit ring counter
✓ 2. 6-bit ripple counter
✗ 3. 3-bit ripple counter
✗ 4. 3-bit twisted -ring counter

Question ID : **54592776292**

Q.14 The total reactive power demand by inductor is completely supplied by capacitor in the given circuit at a frequency x 10^6 rad/sec.



Ans
✗ 1. 27
✗ 2. 15
✓ 3. 22
✗ 4. 18

Question ID : **54592776290**

Q.15 the given input _____, Final value theorem is not applicable for the system.

Ans
✗ 1. parabolic

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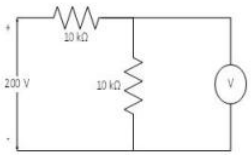
✗ 2. ramp

✓ 3. exponential

✗ 4. step

Question ID : **54592776288**

Q.16 In the figure shown below, the voltage across the resistance 10Ω is to be measured by a voltmeter of range (0-50) V having sensitivity 20KΩ/V. The reading of the voltmeter is _____ V.



Ans

✗ 1. 94 V

✗ 2. 98 V

✓ 3. 99 V

✗ 4. 95 V

Question ID : **54592776285**

Q.17 For Maxwell's inductance- capacitance bridge, which is used to measure an unknown inductance in comparison with capacitance. The various values at balance,
R2 = 500Ω, R3 = 600Ω, R4 = 1200Ω, C4 = 0.3μF.
The value of storage (Q factor of coil), if frequency is 500Hz is _____.

Ans

✗ 1. 2.17

✓ 2. 1.81

✗ 3. Zero

✗ 4. 1.13

Question ID : **54592776293**

Q.18 A single phase circuit is used for power measurement by electrodynamometer .The load voltage is 100V and load current is 10A at a lagging power factor of 0.8. The wattmeter voltage circuit has inductance of 30mH and resistance of 1000Ω. So when the pressure coil is connected is connected on the supply side, the percentage error in power in wattmeter reading is _____.

Ans

✓ 1. 5.96

✗ 2. 5.69

✗ 3. 5.25

✗ 4. 5.6

Question ID : **54592776289**

Q.19 Traction is done in case of dc series motor because:

Ans

✓ 1.
torque is proportional to armature current and speed is inversely proportional to torque

✗ 2.
torque is proportional to the square of armature current and speed is inversely proportional to torque

✗ 3.
both torque and speed are proportional to the square of armature current

✗ 4.
torque is proportional to the square of armature current and speed is directly proportional to torque

Question ID : **54592776277**

Q.20

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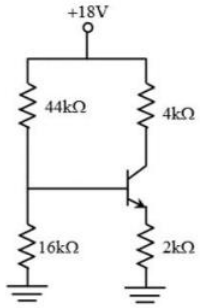
A 4-pole, 50Hz, 3-φ induction motor running on full load develops a useful torque of 180Nm at a rotor frequency of 1.5 Hz. The shaft power output is _____.

Ans
1. 46 kW ✗
2. 30 kW ✗
3. 23 kW ✗
4. 27 kW ✓

Question ID : **54592776287**

Section : **Discipline3**

Q.1 Consider the circuit shown in the figure. Assume base-to- emitter voltage $V_{BE} = 0.8\ V$ and common base current gain (α) of the transistor is unity.



The value of the collector- to – emitter voltage V_{CE} (in volt) is _____.

Ans
1. 6.0 ✓
2. 7 ✗
3. 6.5 ✗
4. 5.5 ✗

Question ID : **54592776312**

Q.2 For a n-channel JFET, the pinch off voltage V_p is -4 V. V_{DD} is 10 V and the drain saturation current at zero gate bias I_{DD} is 2 mA. The value of the saturated drain current for a gate voltage of -2 V is:

Ans
1. 0.5 mA ✗
2. 4.5 mA ✗
3. 18 mA ✓
4. 2 mA ✗

Question ID : **54592776314**

Q.3 When the gate to source voltage (V_{GS}) of a MOSFET with threshold voltage of 400 mV, working in saturation is 900 mV, the drain current is observed to be 1 mA. Neglecting the channel width modulation and assuming that the MOSFET is operating at saturation, the drain current for an applied V_{GS} of 1400 mV is:

Ans
1. 3.5 mA ✗
2. 0.5 mA ✗
3. 2.0 mA ✗
4. 4.0 mA ✓

Question ID : **54592776315**

Q.4 A Series resonant circuit has bandwidth of 20KHz and resonance frequency of 1.5MHz. The value of resistance R if C = 120 pF?

Ans
1. 11.2 Ω ✗
2. 12 Ω ✗
3. 14 Ω ✗

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✔ 4. 11.7 Ω

Question ID : **54592776299**

Q.5 Pair of active transducers is:

Ans
✘ 1. Thermistor , Solar cell
✘ 2. Solar cell , LVDT
✘ 3. Thermocouple , Thermistor
✔ 4. Thermocouple, Solar cell

Question ID : **54592776300**

Q.6 For determination of voltage regulation of an alternator, which one of the methods give more accurate result?

Ans
✘ 1. Synchronous impedence method
✘ 2. MMF method
✘ 3. American institution Standard method
✔ 4. Potier triangle method

Question ID : **54592776297**

Q.7 As the system is used as an oscillator, a time-invariant control system is given by $\frac{10}{S^3+10S^2+5S+K}$ the oscillator frequency in rad / sec is _____.

Ans
✘ 1. 3
✘ 2. 1.28
✔ 3. 2.28
✘ 4. 3.6

Question ID : **54592776302**

Q.8 Which bridge is used to determine frequency?

Ans
✔ 1. Wien bridge
✘ 2. De Sauty bridge
✘ 3. Campbell bridge
✘ 4. Anderson bridge (E)

Question ID : **54592776301**

Q.9 A heavily doped n-typed semiconductor has the following data:

Hole-electron mobility ratio: 0.4
Doping concentration: 4.2×10^8 atoms/m^3
Intrinsic concentration: 1.5×10^4 atoms/m^3
The ratio of conductance of the n-type semiconductor to that of the intrinsic semiconductor of same material and at the same temperature is given by:

Ans
✔ 1. 20,000
✘ 2. 10,000
✘ 3. 2,000
✘ 4. 0.0005

Question ID : **54592776316**

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Q.10 The stabilty criteria for the minimum phase system is:

Ans
- ✗ 1. phase margin should be positive and gain margin negative.
- ✓ 2. both gain margin and phase margin should be positive
- ✗ 3. both gain margin and phase margin should be negative
- ✗ 4. phase margin should be negative and gain margin positive.

Question ID : **54592776305**

Q.11 Over single cage rotor , the advantage of the double squirrel -cage induction motor is:

Ans
- ✗ 1. power factor is higher
- ✓ 2. starting current is lower
- ✗ 3. efficiency is higher
- ✗ 4. slip is large

Question ID : **54592776298**

Q.12 The slot wedges are made of in case of dc machine _____.

Ans
- ✓ 1. Silicon steel
- ✗ 2. Mild steel
- ✗ 3. Cast iron
- ✗ 4. Fibre

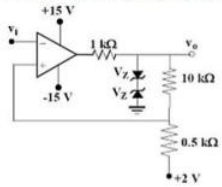
Question ID : **54592776306**

Q.13 The presence of zeros in a row while forming a Routh array, indicates that the system.

Ans
- ✓ 1. has symmetrically located roots.
- ✗ 2. is stable
- ✗ 3. is insensitive to the variation in gain
- ✗ 4. has asymmetrical located roots

Question ID : **54592776304**

Q.14 The circuit of a Schmitt trigger is shown in the figure. The zener-diode combination maintains the output between ± 7V.The width of the hysteresis band is _____V.



Ans
- ✗ 1. 0.701
- ✗ 2. 0.697
- ✓ 3. 0.666
- ✗ 4. 0.795

Question ID : **54592776310**

Q.15

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A 200V, DC Shunt motor is operating at a speed of 1500 rpm. The armature resistance is 0.4Ω and armature current is 10A. What extra resistance (in Ω) to be put in circuit to maintain same speed and torque if the excitation of the machine is reduced by 10 percentage?

Ans
✗ 1. 30
✗ 2. 15
✓ 3. 21
✗ 4. 23

Question ID : **54592776309**

Q.16 The threshold voltage V_T is negative for:

Ans
✗ 1. A p-channel JFET.
✓ 2. An n-channel depletion MOSFET.
✗ 3. An n-channel enhancement MOSFET.
✗ 4. A p-channel depletion MOSFET.

Question ID : **54592776311**

Q.17 "The perfect dielectric medium behaves like a perfect transmitter of EM wave". The statement is:

Ans
✗ 1. depends upon environmental condition.
✗ 2. False
✗ 3. can't say
✓ 4. True

Question ID : **54592776308**

Q.18 For good stabilization in voltage divider bias, the current I_1 flowing through R_1 and R_2 should be equal to or greater than:

Ans
✓ 1. 10 I_B
✗ 2. 2 I_B
✗ 3. 4 I_B
✗ 4. 3 I_B

Question ID : **54592776313**

Q.19 The simplified form of the logic function A+BC is,

Ans
✓ 1. (A+B)(A+C)
✗ 2. $\overline{ABC}$
✗ 3. AB+BC
✗ 4. $\bar{A}$ B + A $\bar{B}$ C

Question ID : **54592776307**

Q.20 A 500KVA, 200/100V, 1-φ transformer is connected as an auto transformer to supply a 200V circuit from a 300V source. The auto transformer has the KVA rating _____.

Ans
✗ 1. 500
✗ 2. 1000
✗ 3. 2000

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✔ 4. 1500

Question ID : **54592776303**

Section : **Discipline4**

Q.1 In a self-controlled synchronous motor fed from a variable frequency inverter:

Ans
✘ 1. The rotor poles invariably have damper windings
✔ 2. The frequency of the stator decides the rotor speed
✘ 3. The speed of the rotor decides stator frequency
✘ 4. There are stability problems

Question ID : **54592776321**

Q.2 A single-phase, 230 V, 50 Hz AC mains fed fully controlled bridge rectifier is feeding a 200 V dc, 1500 rpm, 10 A separately excited dc motor with ripple free continuous current under all operating conditions. The armature resistance is 1 Ω and motor torque is 15 Nm. What will the motor speed be at a firing angle of 30° ?

Ans
✘ 1. 904 rpm
✘ 2. 1428.78 rpm
✔ 3. 1318.5 rpm
✘ 4. 2955.54 rpm

Question ID : **54592776319**

Q.3 The most suitable device for high frequency inversion in SMPS is:

Ans
✘ 1. GTO
✔ 2. MOSFET
✘ 3. BJT
✘ 4. IGBT

Question ID : **54592776322**

Q.4 If a signal is folded about origin in time then its:

Ans
✔ 1. Phase spectrum sign changes and magnitude remains unchanged
✘ 2. Magnitude spectrum undergoes change in sign
✘ 3. Magnitude remains unchanged
✘ 4. Phase spectrum undergoes change in sign

Question ID : **54592776333**

Q.5 A separately excited dc motor runs at 900 rpm from a 198 V dc supply. The motor is fed from a 230 V, 50 Hz single phase fully controlled bridge converter with a firing angle of α. If the motor has to run at 500 rpm on no load, then value of α would be:

Ans
✔ 1. 57.9°
✘ 2. 62.0°
✘ 3. 86.4°
✘ 4. 73.5°

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Question ID : **54592776320**

Q.6 If X(z) has a single pole on the unit circle, on negative real axis then, x(n) is,

Ans

✗ 1. Constant sequence

✗ 2. Signed decaying system

✗ 3. Signed growing sequence

✓ 4. Signed constant sequence

Question ID : **54592776336**

Q.7 A three phase converter feeds pure resistance load at a firing angle of $\alpha = 60°$. The average value of current flowing in the loads is 10 A. If a very large inductance is connected in the load circuit, then the:

Ans

✓ 1. Average value of current will remain as 10 A

✗ 2.
Trend of variation of current cannot be predicted unless the exact value of inductance connected is known

✗ 3. Average value of current will become less than 10 A.

✗ 4. Average value of current will become greater than 10 A

Question ID : **54592776327**

Q.8 The Fourier transform of a signal $h(t)$ is

$H(j\omega) = \frac{(2cos\omega)(sin2\omega)}{\omega}$ The value of $h(0)$ is :

Ans

✗ 1. ½

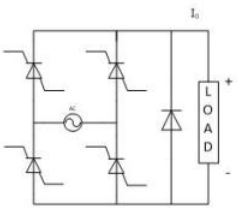
✓ 2. 2

✗ 3. 1

✗ 4. 1/4

Question ID : **54592776334**

Q.9 A single phase fully controlled rectifier is supplying a load with an anti-parallel diode as shown in the figure. All switches and diodes are ideal. Which one of the following is true for instantaneous load voltage and current?



Ans

✗ 1. $v_0 < 0 \ \& \ i_0 < 0$

✗ 2. $v_0 < 0 \ \& \ i_0 \geq 0$

✓ 3. $v_0 \geq 0 \ \& \ i_0 \geq 0$

✗ 4. $v_0 \geq 0 \ \& \ i_0 < 0$

Question ID : **54592776328**

Q.10

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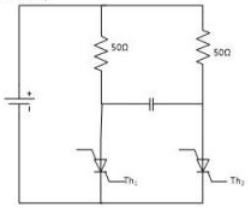
A voltage commutation circuit is shown in figure. If the turn off time of the SCR's is 50 m sec and a safety margin of 2 is considered, what will be the approximate minimum value of capacitor required for proper commutation? (voltage is 100 V)



Ans
1. ✗ 1.44 μF
2. ✗ 0.91 μF
3. ✓ 2.88 μF
4. ✗ 0.72 μF

Question ID : **54592776325**

Q.11 A 100 kW, 500 V, 2000 rpm separately excited dc motor is to be controlled from 400 V, 50 Hz three phase source through a three phase full converter. The DC motor parameters are as

$r_a = 0.2\ \Omega, K_m = 1.6\ V - s/rad$
Rated armature current=210 A
No load armature current = 10% of rated current
Assume armature current is continuous and ripple free. At a firing angle of 30^0, the approximate no-load speed of motor will be:

Ans
1. ✗ 2245 rpm
2. ✗ 1122 rpm
3. ✓ 2760 rpm
4. ✗ 1831 rpm

Question ID : **54592776318**

Q.12 The Fourier series for the function $f(x) = \sin^2 x$ is:

Ans
1. ✓ $0.5 - 0.5Cos2x$
2. ✗ $1 - Cos2x$
3. ✗ $Sinx + Cosx$
4. ✗ $Sin2x + Cos2x$

Question ID : **54592776332**

Q.13 In sinusoidal pulse modulation used in PWM inverter, amplitude and frequency for triangular carrier and sinusoidal reference signals are 10 V, 2 KHz and 2 V, 100 Hz. If peak of the triangular carrier and reference sinusoidal coincide then the modulation index and pulse width is"

Ans
1. ✗ 0.2, 28.8°
2. ✗ 0.4, 14.4°
3. ✓ 0.2, 14.4°
4. ✗ 0.4, 28.8°

Question ID : **54592776330**

Q.14 A chopper is used for on-off control of a dc separately excited motor. The chopper is fed from a dc source of 230 V and it has on time of 10 msec and off time of 15 msec. the motor constants are as following:

Armature resistance $r_a = 3\Omega$
Voltage constant $K_m = 0.5\ V - s/rad$
Assume motor current is continuous. For a speed of 1500 rpm, the average load current will be

Ans
1. ✗ 24.5 A

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✔ 2. 4.5 A

✘ 3. 30.7 A

✘ 4. 50.5 A

Question ID : **54592776317**

Q.15 A three-phase fully-controlled thyristor bridge converter is used as line commutated inverter to feed 50 kW power 420 V dc to a three phase, 415 V (line), 50 Hz ac mains, consider dc link current to be constant. The rms current of the thyristor is:

Ans

✘ 1. 119.05 A

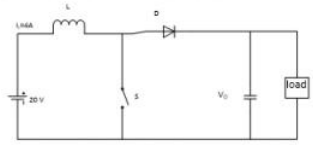
✔ 2. 68.73 A

✘ 3. 39.68 A

✘ 4. 79.37 A

Question ID : **54592776331**

Q.16 In the circuit shown in figure, the switch is operated at a duty cycle of 0.5. A large capacitor is connected across the load. The inductor current is assumed to be continuous.



The average voltage across the load and the average current through the diode will respectively be:

Ans

✘ 1. 10 V, 8 A

✘ 2. 40 V, 8 A

✘ 3. 10 V, 2A

✔ 4. 40 V, 2 A

Question ID : **54592776329**

Q.17 A single phase voltage source inverter is controlled in a single pulse-width modulated mode with a pulse width of 150° in each half cycle. Total harmonic distortion is defined as $THD = \frac{\sqrt{V_{rms}^2 + V_1^2}}{V_1} \times 100$ Where V_1 is the rms value of the fundamental component of the output voltage. The THD of output AC voltage waveform is:

Ans

✘ 1. 66.65%

✘ 2. 30.49%

✘ 3. 48.42%

✔ 4. 31.83%

Question ID : **54592776323**

Q.18 A fully controlled natural commutated 3-phase bridge rectifier is operating with a firing angle $\alpha = 30$. The peak to peak voltage ripple expressed as a ratio of the peak output DC voltage at the output of the converter bridge is:

Ans

✘ 1. $1 - \frac{\sqrt{3}}{2}$

✔ 2. 0.5

✘ 3. $\sqrt{3} - 1$

✘ 4. $\frac{\sqrt{3}}{2}$

Question ID : **54592776324**

Q.19 Consider a discrete time signal given by

$x[n] = (-0.25)^n u[n] + (0.5)^n u[-n-1]$ The region of convergence of its Z-transform would be:

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Ans ✔ 1.

The annular region between the two circles, both centered at origin and having radii 0.25 and 0.5

✗ 2. The entire Z plane

✗ 3.

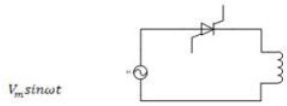
The region outside the circle of radius 0.25 and centered at origin

✗ 4.

The region inside the circle of radius 0.5 and centered at origin

Question ID : **54592776335**

Q.20 A half wave thyristor converter supplies a purely inductive load as shown in figure. Triggering angle of the thyristor is 120, the extinction angle will be:



Ans ✔ 1. 240 °

✗ 2. 200 °

✗ 3. 180 °

✗ 4. 120 °

Question ID : **54592776326**

Section : **Discipline5**

Q.1 8 bit signed integers in 2's complement form are read into the accumulator of an 8085 microprocessor from an I/O port using the following assembly language program segment with symbolic addresses.

```
BEGIN:   IN PORT
         RAL
         JNC    BEGIN
         RAR
END:     HLT
```

This program:

Ans ✔ 1. Halts upon reading a negative number

✗ 2. Halts upon reading a zero

✗ 3. Never halts

✗ 4. Halts upon reading a positive number

Question ID : **54592776344**

Q.2 The procedure of modifying work content to give more meaning and enjoyment to the job by involving employees in planning, organization and control of their work, is termed as

Ans ✔ 1. Job enrichment

✗ 2. Job evaluation

✗ 3. Job enlargement

✗ 4. Job rotation

Question ID : **54592776354**

Q.3 Given the relationship between the input $u(t)$ and the output $y(t)$ to be $y(t) = \int_0^t (2 + t - \tau)e^{-3(t-\tau)}u(\tau)d\tau$ The transfer function $Y(s)/U(s)$ is:

Ans

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1. $\frac{s+2}{(s+3)^2}$
2. $\frac{2e^{-2s}}{s+3}$
3. $\frac{2s+7}{(s+3)^2}$
4. $\frac{2s+5}{s-3}$

Question ID : **54592776341**

Q.4 Based on what the Kyoto Protocol set emission reduction targets for the group of greenhouse gases?

Ans
1. Hydrogen equivalents
2. Carbon dioxide equivalents
3. Nitrogen equivalents
4. Oxygen equivalents

Question ID : **54592776351**

Q.5 Which one of the following is an important heat trapping gas?

Ans
1. Nitrogen
2. Carbon monoxide
3. Carbon dioxide
4. Hydrogen

Question ID : **54592776349**

Q.6 What is the vectored address of interrupt RST5?

Ans
1. 0040H
2. 0008H
3. 0005H
4. 0028H

Question ID : **54592776342**

Q.7 Specify the contents of accumulator when the following program is executed
MVI A, C4 H
ORA A
RRC
RAL
RRC

Ans
1. 62 H
2. 42 H
3. 52 H
4. None of the given options

Question ID : **54592776345**

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Q.8 Maximum amount of gas found in air is:

Ans
✔ 1. Nitrogen
✘ 2. Oxygen
✘ 3. Carbon dioxide
✘ 4. Hydrogen

Question ID : **54592776348**

Q.9 The input $x(t)$ and $y(t)$ of a system are related as $y(t) = \int_{-\infty}^{t} x(\tau)\cos(3\tau)d\tau$ The system is:

Ans
✔ 1. Stable and not time invariant
✘ 2. Not time invariant and stable
✘ 3. Time invariant and stable
✘ 4. Time invariant and not stable

Question ID : **54592776337**

Q.10 The time by which the activity completion time can be delayed without affecting the start of succeeding activities, is known as

Ans
✔ 1. Free float
✘ 2. Interfering float
✘ 3. Total float
✘ 4. Duration

Question ID : **54592776355**

Q.11 A linear time-invariant system with an impulse response $h(t)$ produces output $y(t)$ when input $x(t)$ is applied. When the input $x(t-\tau)$ is applied to a system with impulse response $h(t-\tau)$, the output will be:

Ans
✘ 1. $y\{2(t-\tau)\}$
✔ 2. $y(t-2\tau)$
✘ 3. $y(t-\tau)$
✘ 4. $y(t)$

Question ID : **54592776339**

Q.12 Why hydro-fluorocarbons are no harm to the ozone layer?

Ans
✘ 1. Because they contain nitrogen
✔ 2. Because they do not contain chlorine
✘ 3. Because they contain carbon
✘ 4. Because they contain chlorine

Question ID : **54592776353**

Q.13 In 8085 microprocessor unit scratch pad memory comprises of:

Ans
✘ 1. W, Z, B, C, D, E, H and L registers
✔ 2. B,C,D, E, H AND L registers

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3. W, Z, B, C, D and E registers

4. W, Z, B, C, D, E, H, L and status registers

Question ID : **54592776346**

Q.14 How food production reduced due to climate change?

Ans

1. Due to reduction in pollution
2. Due to application of organic manures
3. Due to modern technologies
4. Due to increase in pests

Question ID : **54592776350**

Q.15 A system with input $x(t)$ and output $y(t)$ is defined by the input-output relationship $y(t) = \int_{-\infty}^{2t} x(\tau)d\tau$ The system will be :

Ans

1. Causal, time-invarient and unstable
2. Causal, time-invarient and stable
3. Non-causal, time-invarient and unstable
4. Non-causal, time-variant and unstable

Question ID : **54592776340**

Q.16 For what production and consumption phase out schedules the Montreal Protocol has established?

Ans

1. Global warming emitting gases
2. Ozone layer depleting substances
3. Greenhouse emitting gases
4. Water level increasing substances

Question ID : **54592776352**

Q.17 Wildlife Week is celebrated on

Ans

1. 15th October to 2 1st October
2. 1st June to 7th June
3. 15th June to 21st June
4. 1st October to 7th October

Question ID : **54592776347**

Q.18 In a 8085 microprocessor the value of the stack pointer (SP) is 2010 H and that of DE register pair is 1234 H before the following code is executed. The value of the DE register pair after the following code is executed is:

```
LXI H, 0000H
PUSH H
PUSH H
POP B
DAD SP
XCHG
```

Ans

1. 1232 H

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✔ 2. 200 EH

✗ 3. 200 CH

✗ 4. 2010 H

Question ID : **54592776343**

Q.19 Which Amendment was agreed to phase down HFCs under the Montreal Protocol?

Ans

✗ 1. Delhi Amendment

✗ 2. Paris Amendment

✗ 3. New York Amendment

✔ 4. Kigali Amendment

Question ID : **54592776356**

Q.20 Let $x(t) = rect(t - \frac{1}{2})$ {where, $rect(x) = 1$ for $-\frac{1}{2} \leq x \leq \frac{1}{2}$ and zero otherwise}

Then, if $sinc(x) = \frac{\sin(\pi x)}{\pi x}$, the Fourier transform of $x(t) + x(-t)$ will be given by:

Ans

✔ 1. $2\,Sinc\left(\frac{\omega}{2\pi}\right)\cos(\frac{\omega}{2})$

✗ 2. $2\,Sinc\left(\frac{\omega}{2\pi}\right)$

✗ 3. $Sinc\left(\frac{\omega}{2\pi}\right)$

✗ 4. $Sinc\left(\frac{\omega}{2\pi}\right)\cos(\frac{\omega}{2})$

Question ID : **54592776338**