



हिन्दुस्तान पेट्रोलियम कॉर्पोरेशन लिमिटेड
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Participant ID	WWW.ALLEXAMREVIEW.COM
Participant Name	
Test Center Name	WWW.EXAMBOOK.CO
Test Date	11/08/2021
Test Time	2:00 PM - 4:30 PM
Subject	ELECTRICAL ENGINEER

Section : English Language

Q.1 Pick the most appropriate synonym of:

fundamental

- Ans ☒ 1. minor
☒ 2. Basic
☐ 3. transparent
☐ 4. advanced

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Question ID : 50389010961

Status : Answered

Chosen Option : 2

Q.2 Which part of the sentence contains an error?

Each and every person attending the meeting want to give a feedback.

- Ans ☒ 1. want to
☐ 2. Each and every person
☐ 3. give a feedback
☐ 4. attending the meeting

Question ID : 50389010970

Status : Answered

Chosen Option : 4

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Q.3 Select the most appropriate option to complete the sentence.

This is _____ car and you should park it over _____.

- Ans
- ☒ 1. Their, their
 - ☒ 2. There, there
 - ☒ 3. There, their
 - ☒ 4. Their, there

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Question ID : 50389010960
Status : Answered
Chosen Option : 4

Q.4 Choose the appropriate words to complete the phrase. Very soon, I am going to run _____ money.

- Ans
- ☒ 1. Short in
 - ☒ 2. Short for
 - ☒ 3. short of
 - ☒ 4. Short to

Question ID : 50389010967
Status : Answered
Chosen Option : 3

Q.5 Which pair of conjunctions can be used for this sentence?

_____ it rains, the weather will remain hot.

- Ans
- ☒ 1. from
 - ☒ 2. so
 - ☒ 3. Unless
 - ☒ 4. whereas

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Question ID : 50389010957
Status : Answered
Chosen Option : 3

Q.6 Pick the most appropriate antonym of:

blessing

- Ans
- ☒ 1. blight
 - ☒ 2. godsend
 - ☒ 3. boon
 - ☒ 4. Grace

Question ID : 50389010963
Status : Answered
Chosen Option : 1

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Q.7 Choose the most appropriate option to complete the sentence.

Messages are passed _____ the brain and rest of the body through the spinal cord.

- Ans
- ☒ 1. at
 - ☒ 2. with
 - ☒ 3. Among
 - ☒ 4. between

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Question ID : 50389010956
Status : Answered
Chosen Option : 4

Q.8 Select the most appropriate option to complete the sentence.

My mother _____ in 1990.

- Ans
- ☒ 1. Was being graduated
 - ☒ 2. Had being graduated
 - ☒ 3. Has had graduated
 - ☒ 4. Graduated

Question ID : 50389010959
Status : Answered
Chosen Option : 1

Q.9 Choose the word which can be used in place of the words underlined.

I avoid lifts because of my fear of closed and confined spaces.

- Ans
- ☒ 1. Cynophobia
 - ☒ 2. Xenophobia
 - ☒ 3. Claustrophobia
 - ☒ 4. Acrophobia

Question ID : 50389010964
Status : Answered
Chosen Option : 3

Q.10 Select the most appropriate option to complete the sentence. I have _____ homework to do than my sister.

- Ans
- ☒ 1. Little
 - ☒ 2. More less
 - ☒ 3. Least
 - ☒ 4. Less

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Question ID : 50389010958
Status : Answered
Chosen Option : 4

Q.11 Select the misspelt word.

- Ans
- ☒ 1. friend
 - ☒ 2. mischief
 - ☒ 3. Sliegh
 - ☒ 4. Vein

Question ID : 50389010965
Status : Answered
Chosen Option : 3

Q.12 Choose the sentence which is grammatically correct.

- Ans
- ☒ 1. many tourists go to winters in Goa
 - ☒ 2. many tourists go to Goa in winters
 - ☒ 3. in many winters tourists go to Goa
 - ☒ 4. many Goa go to tourists in winters

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Question ID : 50389010971
Status : Answered
Chosen Option : 2

Q.13 Fill in the blank using the most appropriate phrase.

Apple company keeps _____ new models of phones in the global market every now and then.

- Ans
- ☒ 1. Bringing out
 - ☒ 2. Bringing off
 - ☒ 3. Bringing down
 - ☒ 4. Bringing with

Question ID : 50389010968
Status : Answered
Chosen Option : 1

Q.14 Which part of the sentence contains an error?

I did not want India to loose the match that day.

- Ans
- ☒ 1. want India to
 - ☒ 2. that day
 - ☒ 3. I did not
 - ☒ 4. loose the match

Question ID : 50389010969
Status : Answered
Chosen Option : 3

Q.15 Choose the correct preposition. You must cover your face _____ a mask when you step out.

Ans ☒ 1. with

☐ 2. through

☐ 3. in

☐ 4. Of

Question ID : 50389010955

Status : Answered

Chosen Option : 1

Q.16 Pick the most appropriate synonym of:

despise

Ans ☐ 1. appreciate

☒ 2. hate

☐ 3. Cherish

☐ 4. Condone

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Question ID : 50389010962

Status : Answered

Chosen Option : 2

Q.17 Select the misspelt word.

Ans ☐ 1. Calendar

☒ 2. Janiter

☐ 3. Decorator

☐ 4. mentor

Question ID : 50389010966

Status : Answered

Chosen Option : 1

Section : Quantitative Aptitude

Q.1 A can do a work in 6 days, B and C working together can do it in 4 days, A and C working together can do it in 3 days. In how many days B alone can do the work?

Ans ☐ 1. 14

☐ 2. 13

☒ 3. 12

☐ 4. 10

Question ID : 50389010990

Status : Answered

Chosen Option : 3

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Q.2 A can do a work in 8 days working 10 hours a day. B can do the same work in 10 days working 7 hours a day. How many days will they take to complete the work if they work together for 8 hours a day?

Ans ☒ 1. 4

☒ 2. $4\frac{2}{5}$

☒ 3. $4\frac{1}{4}$

☒ 4. $4\frac{2}{3}$

Question ID : 50389010989

Status : Answered

Chosen Option : 4

Q.3 A shopkeeper earns a profit of 25 percent after allowing 25 percent discount. Find his profit percentage if he allows only 16 percent discount.

Ans ☒ 1. 40

☒ 2. $28\frac{4}{7}$

☒ 3. 42

☒ 4. 32

Question ID : 50389010992

Status : Marked For Review

Chosen Option : 2

Q.4 A trader usually sells his goods at 40 percent profit. However, during off season, he reduces his selling price by 20 percent. What is his reduced profit percentage?

Ans ☒ 1. 15

☒ 2. 16

☒ 3. 12

☒ 4. 18

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Question ID : 50389010993

Status : Marked For Review

Chosen Option : 2

Q.5 A sum of Rs. 34000 is given to A and B in such a way that three-fifth of share of A is equal to one-fourth of share of B. How much more money (in Rs.) B receives in comparison to A?

Ans ☒ 1. 14000

☒ 2. 10000

☒ 3. 17000

☒ 4. 24000

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Question ID : 50389010981

Status : Answered

Chosen Option : 1

Q.6 Sunayana spent 0.05 part of her savings in Stocks, 0.4 part in Fixed Deposits, 0.4 part amounting to Rs. 36000 in gold ornaments and remaining she kept as cash. How much cash (in Rs.) has she kept?

- Ans
- ☒ 1. 13850
 - ☒ 2. 13500
 - ☒ 3. 12745
 - ☒ 4. 13000

Question ID : 50389010979
 Status : Answered
 Chosen Option : 2

Q.7 Two trains take 2 minutes to cross each other when running in the same direction. They take 30 seconds to cross each other when running in opposite directions. Find the ratio of the speed of the faster train to that of the slower train.

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

Question ID : 50389010987
 Status : Answered
 Chosen Option : 2

Q.8 Simplify the following expression.

$$\frac{9(12+x)(12-x)^3}{144-x^2} - 2\sqrt{\frac{4x-28}{x-7}}$$

- Ans
- ☒ 1. $40 - 3x$
 - ☒ 2. $32 - 3x$
 - ☒ 3. $40 + 3x$
 - ☒ 4. $34 - 3x$

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Question ID : 50389010977
 Status : Answered
 Chosen Option : 2

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Q.9 Sum of the squares of two natural numbers is 97. If numbers differ by 5, then what is the positive difference in their squares?

- Ans
- ☐ 1. 55
 - ☐ 2. 75
 - ☒ 3. 65
 - ☐ 4. 85

Question ID : 50389011004
Status : Answered
Chosen Option : 3

Q.10 Sum of two numbers is 53. If the numbers differ by 7, then what is the product of these two numbers?

- Ans
- ☐ 1. 696
 - ☐ 2. 744
 - ☒ 3. 690
 - ☐ 4. 638

Question ID : 50389011002
Status : Answered
Chosen Option : 3

Q.11 A sum of Rs. 64800 was invested by Ramesh and Karan together to start a small business. They earned a profit of Rs. 13500 at the end of the year. Ramesh received Rs. 7500 as his share in the profit. If profit was divided in the ratio of the sums invested, how much money (in Rs.) was invested by Karan?

- Ans
- ☐ 1. 28000
 - ☐ 2. 36000
 - ☐ 3. 32400
 - ☒ 4. 28800

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Question ID : 50389010982
Status : Answered
Chosen Option : 4

Q.12 The selling price of an article is $\frac{8}{5}$ times of its cost price. Find the profit percentage.

- Ans
- ☐ 1. 65
 - ☐ 2. 55
 - ☐ 3. 45
 - ☒ 4. 60

Question ID : 50389010991
Status : Answered
Chosen Option : 4

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Q.13 Following table shows the earning (in Rs. 1000) of 5 persons A, B, C, D and E over the months.

What was the average earning (in Rs.) of D over the months?

Month/ Persons	March	April	May	June	July
A	24.2	25.5	25.8	26	26.5
B	23.5	24.2	25.5	27	26.8
C	25.5	24.8	26.5	24	28.2
D	24.3	24.7	25.2	27	28.8
E	25	26.9	27.6	27.5	26.2

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Ans ☒ 1. 25200

☒ 2. 26100

☒ 3. 25750

☒ 4. 26000

Question ID : 50389011005

Status : Answered

Chosen Option : 4

Q.14 The average monthly salary of a group of 15 persons is Rs. 62500. Three new persons join the group whose monthly salaries are Rs. 2000, Rs. 1200 and Rs. 1300 respectively more than the average salary of the initial group. What is the average monthly salary of the new group (in Rs.)?

Ans ☒ 1. 64500

☒ 2. 62750

☒ 3. 63700

☒ 4. 63800

Question ID : 50389010996

Status : Answered

Chosen Option : 2

Q.15 Sum of the digits of a 2-digit number is 7. If number obtained by interchanging the digits is 9 more than the original number, then what is the sum of the squares of the digits of the number?

Ans ☒ 1. 49

☒ 2. 25

☒ 3. 29

☒ 4. 37

Question ID : 50389011003

Status : Answered

Chosen Option : 2

Q.16 A box contains 50 sweets (Laddu). For 600 sweets (Laddu) how many boxes are required?

- Ans ☒ 1. 12
☒ 2. 11
☒ 3. 15
☒ 4. 10

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Question ID : 50389010983
 Status : Answered
 Chosen Option : 1

Q.17 Simplify the following expression.

$$\frac{\sqrt[3]{\frac{729}{2197}} \times \sqrt[3]{\frac{512}{1331}}}{\sqrt[3]{343}}$$

- Ans ☒ 1. $3\frac{75}{143}$
☒ 2. $\frac{72}{1001}$
☒ 3. $9\frac{27}{143}$
☒ 4. $\frac{216}{1001}$

Question ID : 50389010976
 Status : Answered
 Chosen Option : 2

Q.18 Length and breadth of a rectangle are 5 cm and 3 cm. What is the area of that square (in sq. cm) which has the perimeter same as that of the rectangle?

- Ans ☒ 1. 16
☒ 2. 12.25
☒ 3. 10.24
☒ 4. 9

Question ID : 50389010999
 Status : Answered
 Chosen Option : 1

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Q.19 Simplify the following expression.

$$\frac{(0.235+0.325+7.05-0.401)}{0.5-0.05}$$

- Ans
- ☒ 1. 16.04
 - ☒ 2. 16.02
 - ☒ 3. 16.55
 - ☒ 4. 160.2

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Question ID : 50389010978
Status : Answered
Chosen Option : 2

Q.20 Curved surface area and volume of a cylinder are 3168 sq. cm and 22176 cu. cm. What is the height of the cylinder (in cm)?

Use $\pi = \frac{22}{7}$

- Ans
- ☒ 1. 36
 - ☒ 2. 32
 - ☒ 3. 32.5
 - ☒ 4. 34

Question ID : 50389011001
Status : Answered
Chosen Option : 1

Q.21 If two numbers are in the ratio $\frac{1}{4} : \frac{1}{5}$, then by what percentage is the second number less than the first number?

- Ans
- ☒ 1. 30
 - ☒ 2. 25
 - ☒ 3. 20
 - ☒ 4. 28

Question ID : 50389010984
Status : Answered
Chosen Option : 2

Q.22 The average weight of some students in a group is 42 kg. If 8 students having average weight 44 kg leave the group and 3 students having average weight 48.25 kg join the group, the average weight of the new group is 50 g more than that of the original group. How many students were there in the group initially?

- Ans
- ☒ 1. 58
 - ☒ 2. 54
 - ☒ 3. 55
 - ☒ 4. 60

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Question ID : 50389010995
Status : Answered
Chosen Option : 4

Q.23 A 250 m long train crosses a platform of equal length as of the train in 30 seconds. What is the speed of the train in km/h?

- Ans
- ☒ 1. 30
 - ☒ 2. 60
 - ☒ 3. 54
 - ☒ 4. 50

Question ID : 50389010986
Status : Answered
Chosen Option : 2

Q.24 On a certain sum, difference between the interests when interest is compounded 4-monthly and when compounded semi-annually at 12 percent per annum in 1 year is Rs. 632. What is the sum (in Rs.)?

- Ans
- ☒ 1. 505000
 - ☒ 2. 520000
 - ☒ 3. 500000
 - ☒ 4. 480000

Question ID : 50389010998
Status : Marked For Review
Chosen Option : 1

Q.25 If $x^4 - 1 = 2400, y^4 + 1 = 4097, x, y > 0$ find the value of $y^3 - x^3$.

- Ans
- ☒ 1. 855
 - ☒ 2. 15
 - ☒ 3. 195
 - ☒ 4. 169

Question ID : 50389010973
Status : Marked For Review
Chosen Option : 4

Q.26 If $p = 4$ and $q = 3$, then find the value of $(2p - 3q)^{2p-q} \div (3p - 2q)^{p-2q}$.

- Ans
- ☒ 1. 36
 - ☒ 2. -36
 - ☒ 3. $\frac{5}{12}$
 - ☒ 4. $-\frac{5}{36}$

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Question ID : 50389010974
Status : Answered
Chosen Option : 2

Q.27 How many numbers are there between 20 and 50 which are divisible by 3 or have 3 as its digit?

- Ans
- ☒ 1. 10
 - ☒ 2. 11
 - ☒ 3. 16
 - ☒ 4. 18

Question ID : 50389010972
Status : Answered
Chosen Option : 4

Q.28 Find the smallest number which when divided by 8, 7 and 6 leave remainders 6, 5 and 4 respectively.

- Ans
- ☒ 1. 166
 - ☒ 2. 170
 - ☒ 3. 163
 - ☒ 4. 162

Question ID : 50389010975
Status : Answered
Chosen Option : 1

Q.29 Total monthly salary of A and B is Rs. 73500. If A gets 80 percent more than B, then how much (in Rs.) is A paid monthly?

- Ans
- ☒ 1. 26250
 - ☒ 2. 47250
 - ☒ 3. 52000
 - ☒ 4. 66150

Question ID : 50389010985
Status : Answered
Chosen Option : 2

Q.30 A wall with dimensions $30 \text{ m} \times 0.4 \text{ m} \times 4 \text{ m}$ is built with bricks of dimensions $25 \text{ cm} \times 16 \text{ cm} \times 10 \text{ cm}$. If one-eighth of the wall is mortar, then what is the cost of bricks used (in Rs.) at the rate of Rs. 6 per brick?

- Ans ☒ 1. 63000
☒ 2. 52500
☒ 3. 62000
☒ 4. 60000

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Question ID : 50389011000
Status : Answered
Chosen Option : 1

Q.31 Six men can do a work in 6 days. How many days will 4 men take to do one-third of the work?

- Ans ☒ 1. 3
☒ 2. 2
☒ 3. $1\frac{1}{2}$
☒ 4. $2\frac{1}{2}$

Question ID : 50389010988
Status : Answered
Chosen Option : 1

Q.32 Sumit borrowed certain sum on simple interest at 6 percent per annum for the first 1st year, at 7 percent for the next 2 years, at 8 percent for the next 3 years and at 10 percent for the period beyond 6 years. If he pays Rs. 3200 as total interest at the end of 8 years, then what was the sum (in Rs.) that he borrowed?

- Ans ☒ 1. 5200
☒ 2. 4850
☒ 3. 4800
☒ 4. 5000

Question ID : 50389010997
Status : Marked For Review
Chosen Option : 1

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Q.33 Subtract the reciprocal of the product of the numbers $2\frac{1}{3}$, $1\frac{1}{5}$, $\frac{3}{8}$, $1\frac{2}{7}$, $4\frac{2}{7}$, 9 from $\frac{1}{5}$.

- Ans
- ☐ 1. $\frac{27}{5}$
 - ☐ 2. $-67\frac{3}{10}$
 - ☒ 3. $\frac{5}{27}$
 - ☐ 4. $\frac{2}{135}$

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Question ID : 50389010980

Status : Answered

Chosen Option : 3

Q.34 The average of 32 numbers is 29. If two numbers 24 and 16 are removed, then what is the average of the remaining numbers?

- Ans
- ☐ 1. 29
 - ☐ 2. 27
 - ☒ 3. 29.6
 - ☐ 4. 29.8

Question ID : 50389010994

Status : Answered

Chosen Option : 3

Section : Intellectual Potential Test

Q.1 Select the number that will come next in the number series.

2, 3, 6, 11, 18, ?

- Ans
- ☐ 1. 21
 - ☐ 2. 24
 - ☐ 3. 30
 - ☒ 4. 27

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Question ID : 50389011027

Status : Answered

Chosen Option : 4

Q.2 Select the option that is related to the third term in the same way as the second term is related to the first term.

Hillock : Mountain :: Sea : ?

- Ans
- ☒ 1. Lagoon
 - ☒ 2. Lake
 - ☒ 3. Bay
 - ☒ 4. Ocean

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Question ID : 50389011011
Status : Answered
Chosen Option : 4

Q.3 Maya is Babu's wife. Jaya and Daya are siblings. Ajay is Daya's husband's brother. Sujay is Babu's son and Ajay's only brother. How is Daya related to Maya?

- Ans
- ☒ 1. Mother-in-law
 - ☒ 2. Sister-in-law
 - ☒ 3. Daughter
 - ☒ 4. Daughter-in-law

Question ID : 50389011025
Status : Answered
Chosen Option : 4

Q.4 If x is the sum of the smallest and the largest 2-digit prime numbers, what is the value of x?

- Ans
- ☒ 1. 112
 - ☒ 2. 102
 - ☒ 3. 99
 - ☒ 4. 108

Question ID : 50389011032
Status : Answered
Chosen Option : 4

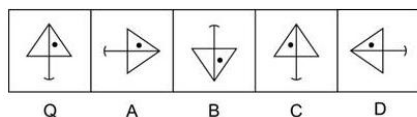
Q.5 In a code language, TRAIN is coded as SSCLM; PLEAD is coded as OMGDC; and STOCK is coded as RUQFJ. Then, how would WHOLE be coded in that language?

- Ans
- ☒ 1. VIQOD
 - ☒ 2. VIQPMF
 - ☒ 3. VJQND
 - ☒ 4. VIPND

Question ID : 50389011018
Status : Answered
Chosen Option : 1

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Q.6 Three out of the following figures (A, B, C and D) are different from the question figure Q. Select the option that is similar to the question figure Q.



- Ans
- ☒ 1. A
 - ☒ 2. C
 - ☒ 3. D
 - ☒ 4. B

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Question ID : 50389011039
Status : Answered
Chosen Option : 3

Q.7 In a code language, mango is called milk; milk is called tomato; tomato is called kiwi; and kiwi is called beet. Then, which one of the following will definitely be white in colour?

- Ans
- ☒ 1. Beet
 - ☒ 2. Mango
 - ☒ 3. Tomato
 - ☒ 4. Kiwi

Question ID : 50389011017
Status : Answered
Chosen Option : 3

Q.8 The sum of two numbers is 99; and their difference is 27. Which is the smaller number among them?

- Ans
- ☒ 1. 63
 - ☒ 2. 36
 - ☒ 3. 72
 - ☒ 4. 27

Question ID : 50389011029
Status : Answered
Chosen Option : 2

Q.9 Select the option that is related to the third term in the same way as the second term is related to the first term.

AK : CM :: HR : ?

- Ans
- ☒ 1. KT
 - ☒ 2. JS
 - ☒ 3. PM
 - ☒ 4. JT

Question ID : 50389011007
Status : Answered
Chosen Option : 4

Q.10 Mary and Lily are sisters. David is Mary's son. Patricia is David's only daughter. How is Mary related to Patricia?

- Ans
- ☒ 1. Granddaughter
 - ☒ 2. Grandmother
 - ☒ 3. Mother
 - ☒ 4. Daughter

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Question ID : 50389011023
Status : Answered
Chosen Option : 2

Q.11 In a code language, MAP is coded as LBQ; PEN is coded as OFO; and NOT is coded as MPU. Then, how would TUB be coded in that language?

- Ans
- ☒ 1. SVC
 - ☒ 2. SWC
 - ☒ 3. TVC
 - ☒ 4. STC

Question ID : 50389011015
Status : Answered
Chosen Option : 1

Q.12 Select the number that will replace the blanks () and complete the number series correctly.

3, 7, 13, 31, 43, 57, ?

- Ans
- ☒ 1. 64
 - ☒ 2. 73
 - ☒ 3. 72
 - ☒ 4. 63

Question ID : 50389011028
Status : Marked For Review
Chosen Option : 2

Q.13 Select the option that is similar to the pair given below:

Car : Formula One

- Ans
- ☒ 1. Horse : Derby
 - ☒ 2. Leisure biking : Motorcycle
 - ☒ 3. World Cup : Bicycle
 - ☒ 4. Boat : Yacht

Question ID : 50389011022
Status : Answered
Chosen Option : 1

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Q.14 Neel is Deepa's only brother. Heera is Neel's mother. Anuj is Heera's only son-in-law.
How is Anuj related to Neel?

- Ans
- ☐ 1. Brother
 - ☐ 2. Wife's brother
 - ☐ 3. Father-in-law
 - ☒ 4. Sister's husband

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Question ID : 50389011024
Status : Answered
Chosen Option : 4

Q.15 If $x\%$ of x is 49, what is the value of x ?

- Ans
- ☐ 1. 77
 - ☒ 2. 70
 - ☐ 3. 51
 - ☐ 4. 60

Question ID : 50389011030
Status : Answered
Chosen Option : 2

Q.16 What is the difference between the place value and the face value of 6 in 756954?

- Ans
- ☐ 1. 594
 - ☐ 2. 994
 - ☐ 3. 5694
 - ☒ 4. 5994

Question ID : 50389011031
Status : Answered
Chosen Option : 2

Q.17 Select the option that is similar to the pair given below:

Car : Garage

- Ans
- ☐ 1. Auto rickshaw : Footpath
 - ☒ 2. Train : Yard
 - ☐ 3. Bus : Shore
 - ☐ 4. Aeroplane : Airport

Question ID : 50389011021
Status : Answered
Chosen Option : 2

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Q.18 Three out of the following four options share a similarity. Select the option that is different from the others.

- Ans  1. Andes : Mountain Range
 2. Sahara : Plateau
 3. Thames : River
 4. Atlantic : Ocean

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Question ID : 50389011013
Status : Answered
Chosen Option : 2

Q.19 Three out of the following four options share a similarity. Select the option that is different from the others.

- Ans  1. Two
 2. Ten
 3. Six
 4. One

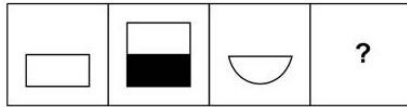
Question ID : 50389011012
Status : Answered
Chosen Option : 4

Q.20 In a code language, BED is coded as 254; GAB is coded as 712; and HID is coded as 894. Then, how would FIG be coded in that language?

- Ans  1. 677
 2. 697
 3. 687
 4. 798

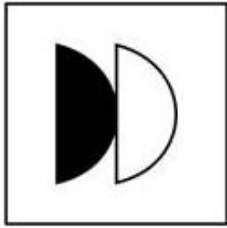
Question ID : 50389011016
Status : Answered
Chosen Option : 2

Q.21 Select the option that is related to the third term in the same way as the second term is related to the first term.



Ans

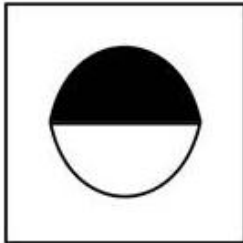
✗ 1.



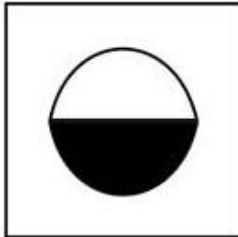
✗ 2.



✗ 3.



✓ 4.



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Question ID : 50389011038

Status : Answered

Chosen Option : 4

Q.22 Select the option that is related to the third term in the same way as the second term is related to the first term.

25 : 49 :: 121 : ?

Ans ✓ 1. 169

✗ 2. 122

✗ 3. 196

✗ 4. 144

Question ID : 50389011008

Status : Answered

Chosen Option : 1

Q.23 Select the option that is similar to the key word given below:

Mango

- Ans
- ☒ 1. Rose
 - ☒ 2. Turnip
 - ☒ 3. Garlic
 - ☒ 4. Litchee

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Question ID : 50389011019
Status : Answered
Chosen Option : 4

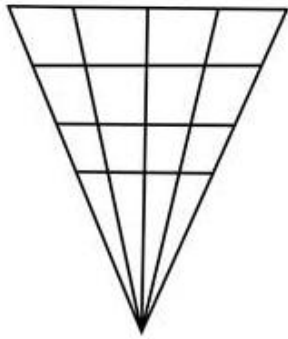
Q.24 Select the number that will come next in the number series.

3, 5, 8, 10, 13, 15, ?

- Ans
- ☒ 1. 20
 - ☒ 2. 19
 - ☒ 3. 18
 - ☒ 4. 17

Question ID : 50389011026
Status : Answered
Chosen Option : 3

Q.25 What is the maximum number of triangles in this image?



- Ans
- ☒ 1. 21
 - ☒ 2. 36
 - ☒ 3. 56
 - ☒ 4. 40

Question ID : 50389011034
Status : Answered
Chosen Option : 4

Q.26 Select the option that is related to the third term in the same way as the second term is related to the first term.

27 : 256 :: 3125 : ?

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- Ans
- ☒ 1. 259824
 - ☒ 2. 46656
 - ☒ 3. 279936
 - ☒ 4. 7776

Question ID : 50389011010
Status : Answered
Chosen Option : 2

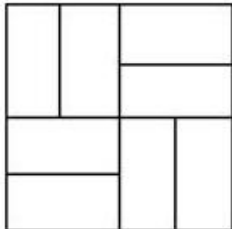
Q.27 Select the option that is related to the third term in the same way as the second term is related to the first term.

Cow : Calf :: Lion : ?

- Ans
- ☒ 1. Puppy
 - ☒ 2. Simba
 - ☒ 3. Lioness
 - ☒ 4. Cub

Question ID : 50389011006
Status : Answered
Chosen Option : 4

Q.28 What is the maximum number of squares and rectangles in this image?



- Ans
- ☒ 1. 22
 - ☒ 2. 13
 - ☒ 3. 21
 - ☒ 4. 17

Question ID : 50389011035
Status : Marked For Review
Chosen Option : 3

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Q.29 Select the option that is similar to the key word given below:

Leopard

- Ans  1. Rhinoceros
 2. Tiger
 3. Fox
 4. Bear

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Question ID : 50389011020
Status : Answered
Chosen Option : 2

Q.30 Three out of the following four options share a similarity. Select the option that is different from the others.

- Ans  1. GRAPE : RGEPA
 2. APPLE : PAELP
 3. GUAVA : UGAVA
 4. BERRY : EBRYR

Question ID : 50389011014
Status : Answered
Chosen Option : 4

Q.31 Select the option that is related to the third term in the same way as the second term is related to the first term.

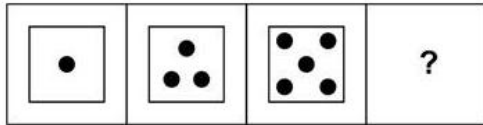
Zoology : Animals :: Ornithology : ?

- Ans  1. Virus
 2. Plants
 3. Snakes
 4. Birds

Question ID : 50389011009
Status : Answered
Chosen Option : 4

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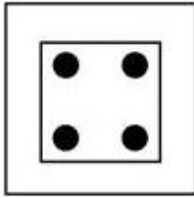
Q.32 Select the option that will replace the question mark and complete the series correctly.



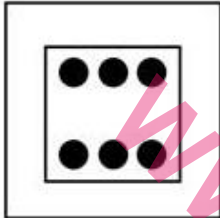
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Ans

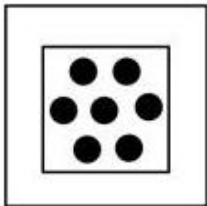
1.



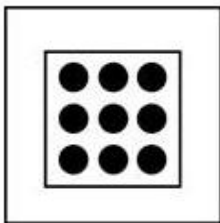
2.



3.

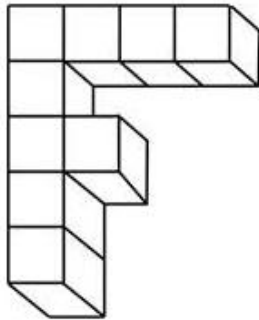


4.



Question ID : 50389011037
Status : Answered
Chosen Option : 3

Q.33 What is the total number of cubes in the 3-D figure given below?



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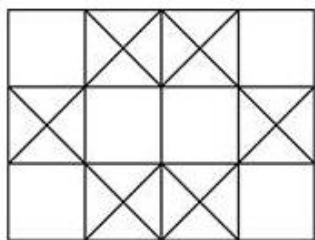
- Ans
- ☒ 1. 12
 - ☒ 2. 8
 - ☒ 3. 14
 - ☒ 4. 9

Question ID : 50389011033

Status : Answered

Chosen Option : 4

Q.34 What is the maximum number of squares in this image?



- Ans
- ☒ 1. 24
 - ☒ 2. 19
 - ☒ 3. 20
 - ☒ 4. 23

Question ID : 50389011036

Status : Answered

Chosen Option : 4

Section : Domain Knowledge

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Q.1 Output voltage wave shape of a basic series inverter is

- Ans
- ☒ 1. Trapezoidal wave
 - ☒ 2. Continuous sinewave
 - ☒ 3. Discontinuous sinewave
 - ☒ 4. Square wave

Question ID : 50389011080

Status : Answered

Chosen Option : 4

Q.2 For a transistor $\beta_{dc} = 49$. Find the value of α .

- Ans
- ☒ 1. 0.9
 - ☒ 2. 0.09
 - ☒ 3. 0.98
 - ☒ 4. 0.99

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Question ID : 50389011090

Status : Answered

Chosen Option : 3

Q.3 A 9 V battery supplies 1 mA current in a series circuit of three resistors R_1 , R_2 and R_3 . If the voltage drops across R_1 , R_2 and R_3 are 1 V, 2 V and 6 V respectively, find the values of R_1 , R_2 and R_3 .

- Ans
- ☒ 1. $R_1 = 6 \text{ k}\Omega$, $R_2 = 2 \text{ k}\Omega$ and $R_3 = 1 \text{ k}\Omega$
 - ☒ 2. $R_1 = 1 \text{ k}\Omega$, $R_2 = 2 \text{ k}\Omega$ and $R_3 = 6 \text{ k}\Omega$
 - ☒ 3. $R_1 = 2 \text{ k}\Omega$, $R_2 = 3 \text{ k}\Omega$ and $R_3 = 4 \text{ k}\Omega$
 - ☒ 4. $R_1 = 4 \text{ k}\Omega$, $R_2 = 2 \text{ k}\Omega$ and $R_3 = 3 \text{ k}\Omega$

Question ID : 50389011043

Status : Answered

Chosen Option : 2

Q.4 A properly shunted centre zero galvanometer is connected in the rotor circuit of a 6-pole, 50 Hz wound rotor induction motor. If the galvanometer makes 90 complete oscillations in one minute, calculate the rotor speed.

- Ans
- ☒ 1. 1470 rpm
 - ☒ 2. 1030 rpm
 - ☒ 3. 970 rpm
 - ☒ 4. 1000 rpm

Question ID : 50389011121

Status : Answered

Chosen Option : 3

Q.5 Two quadrant type B chopper operates in:

- Ans ☒ 1. 1st and 4th quadrants
- ☒ 2. 2nd and 4th quadrants
- ☒ 3. 1st and 2nd quadrants
- ☒ 4. 3rd and 4th quadrants

Question ID : 50389011087

Status : Answered

Chosen Option : 1

Q.6 In induction type energy meter, _____ error is caused due to over compensation for friction.

- Ans ☒ 1. Creeping
- ☒ 2. Phase angle error
- ☒ 3. Breaking error
- ☒ 4. Phantom loading

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Question ID : 50389011108

Status : Answered

Chosen Option : 1

Q.7 A 0 to 200 V voltmeter has a guaranteed accuracy of 0.5 percent of full scale deflection. The voltage measured by the instrument is 50 V. Find the limiting error.

- Ans ☒ 1. 0.25 percent
- ☒ 2. 1 percent
- ☒ 3. 0.5 percent
- ☒ 4. 2 percent

Question ID : 50389011112

Status : Answered

Chosen Option : 4

Q.8 Maxwell bridge is used for the measurement of _____ having the Q-factor in the range _____.

- Ans ☒ 1. Inductors, $1 < Q < 10$
- ☒ 2. capacitors, $1 < Q < 100$
- ☒ 3. Inductors, $100 < Q < 1000$
- ☒ 4. Capacitors and inductors, $1 < Q < 100$

Question ID : 50389011110

Status : Answered

Chosen Option : 1

Q.9 In 8085 microprocessor, when the PUSH instruction is executed the stack pointer register is _____ and when the POP instruction is executed the stack pointer is _____, respectively.

- Ans
- ☒ 1. Decrement by two, increment by two
 - ☐ 2. Decrement by one, increment by one
 - ☐ 3. Increment by one, decrement by one
 - ☐ 4. Increment by two, decrement by two

Question ID : 50389011093
Status : Answered
Chosen Option : 2

Q.10 Convert $(B68)_{16}$ in to equivalent octal number.

- Ans
- ☐ 1. $(5050)_8$
 - ☐ 2. $(5555)_8$
 - ☒ 3. $(5550)_8$
 - ☐ 4. $(4550)_8$

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Question ID : 50389011094
Status : Answered
Chosen Option : 3

Q.11 Amplitude of antisymmetric signal is _____ at the origin.

- Ans
- ☐ 1. Always negative
 - ☒ 2. Always zero
 - ☐ 3. Either positive or negative but not zero
 - ☐ 4. Always positive

Question ID : 50389011059
Status : Answered
Chosen Option : 3

Q.12 Which of the Following is NOT a characteristic of PMMC instruments?

- Ans
- ☒ 1. Non-uniform scale
 - ☐ 2. No hysteresis loss
 - ☐ 3. High accuracy
 - ☐ 4. Used for DC measurements only

Question ID : 50389011104
Status : Answered
Chosen Option : 1

Q.13 An RC phase shift oscillator uses capacitors of $(\frac{1}{\sqrt{6}\pi})$ pf. Find the value of resistance 'R' to produce frequency of 1000 kHz.

- Ans**
- ☒ 1. 25 kΩ
 - ☒ 2. 500 kΩ
 - ☒ 3. 50 kΩ
 - ☒ 4. 250 kΩ

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Question ID : 50389011092
Status : Answered
Chosen Option : 2

Q.14 Find the coefficient of coupling for two coils having $L_1 = 2$ H, $L_2 = 8$ H and $M = 4$ H.

- Ans**
- ☒ 1. 0.75
 - ☒ 2. 1.0
 - ☒ 3. 0.5
 - ☒ 4. 0.25

Question ID : 50389011052
Status : Answered
Chosen Option : 2

Q.15 The resultant transient voltage which appears across the breaker contacts at the instant of arc extinction is known as the _____.

- Ans**
- ☒ 1. Restriking voltage
 - ☒ 2. Recovery voltage
 - ☒ 3. Active recovery voltage
 - ☒ 4. Source voltage

Question ID : 50389011075
Status : Answered
Chosen Option : 1

Q.16 Which of the following method of tariff was proposed by John Hopkinson?

- Ans**
- ☒ 1. Two part tariff
 - ☒ 2. Three part tariff
 - ☒ 3. Block meter rate
 - ☒ 4. Flat demand rate

Question ID : 50389011069
Status : Answered
Chosen Option : 3

Q.17 For a transistor, collector current is 100 times the base current. Find β_{dc} .

- Ans ☒ 1. 100
☒ 2. 10
☒ 3. 50
☒ 4. 90

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Question ID : 50389011089
 Status : Answered
 Chosen Option : 1

Q.18 Which of the following is not an example of Vector quantity?

- Ans ☒ 1. Electric field intensity
☒ 2. Magnetic field intensity
☒ 3. Mass
☒ 4. Acceleration

Question ID : 50389011051
 Status : Answered
 Chosen Option : 3

Q.19 In which of the following commutation technique, the triggering of one SCR commutates the already conducting SCR and vice versa?

- Ans ☒ 1. Class D commutation
☒ 2. Class E commutation
☒ 3. Class C commutation
☒ 4. Class A commutation

Question ID : 50389011079
 Status : Answered
 Chosen Option : 2

Q.20 With reference to fault analysis, L-L fault is _____ fault and the L-L-L-G fault is _____ fault.

- Ans ☒ 1. Unsymmetrical, Unsymmetrical
☒ 2. Unsymmetrical, Symmetrical
☒ 3. Symmetrical, Unsymmetrical
☒ 4. Symmetrical, Symmetrical

Question ID : 50389011071
 Status : Answered
 Chosen Option : 2

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Q.21 In a signal flow graph, _____ is the gain along any path from the input to the output, not passing through any node more than once.

- Ans
- ☒ 1. Closed loop gain
 - ☒ 2. Forward path gain
 - ☒ 3. Loop gain
 - ☒ 4. Feedback gain

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Question ID : 50389011099

Status : Answered

Chosen Option : 2

Q.22 A power plant has the annual factors given as: load factor = 70 percent, Capacity factor = 50 percent, Use factor = 60 percent. If maximum demand is 20 MW, find the reserve capacity over and above the peak load.

- Ans
- ☒ 1. 14 MW
 - ☒ 2. 8 MW
 - ☒ 3. 6 MW
 - ☒ 4. 28 MW

Question ID : 50389011070

Status : Answered

Chosen Option : 2

Q.23 With the help of _____ the surface integral can be converted into a volume integral.

- Ans
- ☒ 1. Coulomb's law
 - ☒ 2. Divergence theorem
 - ☒ 3. Gauss's law
 - ☒ 4. Maxwell's theorem

Question ID : 50389011055

Status : Answered

Chosen Option : 2

Q.24 Which of the following statement is WRONG when underground cables are compared with overhead lines?

- Ans
- ☒ 1. For long distance transmission, overhead lines are used
 - ☒ 2. The erection cost of overhead line is much higher
 - ☒ 3. Underground cables give greater safety to the public
 - ☒ 4. The conductor in overhead lines are less expensive

Question ID : 50389011073

Status : Answered

Chosen Option : 2

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Q.25 Electrostatic type instruments are primarily used as _____.

- Ans
- ☒ 1. Voltmeters
 - ☐ 2. Ohmmeter
 - ☐ 3. Ammeters
 - ☐ 4. Wattmeters

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Question ID : 50389011106
Status : Answered
Chosen Option : 1

Q.26 A 2k Ω resistor is connected across a 10 V battery. Calculate the power consumed by the resistor.

- Ans
- ☐ 1. 5.0 W
 - ☒ 2. 50 mW
 - ☐ 3. 5 mW
 - ☐ 4. 0.5 W

Question ID : 50389011042
Status : Answered
Chosen Option : 2

Q.27 Two equal resistors of 10 Ω each are connected in series with a 20 V dc supply. Find the current through each resistor.

- Ans
- ☐ 1. 8 A
 - ☐ 2. 2 A
 - ☒ 3. 1 A
 - ☐ 4. 4 A

Question ID : 50389011040
Status : Answered
Chosen Option : 3

Q.28 A single phase full bridge inverter has a supply voltage of 100 V dc. What will be the peak reverse blocking voltage of each thyristor?

- Ans
- ☐ 1. 50 V
 - ☐ 2. 200 V
 - ☐ 3. 400 V
 - ☒ 4. 100 V

Question ID : 50389011082
Status : Answered
Chosen Option : 4

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Q.29 The breakaway points of the root-loci of a polynomial equation can occur

- Ans ☒ 1. Anywhere on the complex plane
- ☐ 2. On imaginary axis only
- ☐ 3. On real axis only
- ☐ 4. At origin only

Question ID : 50389011097
Status : Answered
Chosen Option : 3

Q.30 For a DC motor, gross mechanical power developed by the motor is maximum and the motor is supplied through a 220 V source. What will be back emf?

- Ans ☐ 1. 220 V
- ☐ 2. 27.5 V
- ☐ 3. 55 V
- ☒ 4. 110 V

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Question ID : 50389011116
Status : Answered
Chosen Option : 4

Q.31 Which of the following system is an example of closed loop control system?

- Ans ☒ 1. Voltage stabilizer
- ☐ 2. Traffic light control system
- ☐ 3. Bread toaster
- ☐ 4. TV remote control

Question ID : 50389011096
Status : Answered
Chosen Option : 3

Q.32 For series connected SCRs, static equalization is obtained with the help of _____.

- Ans ☒ 1. Resistors only
- ☐ 2. Resistors, capacitors and diodes
- ☐ 3. Capacitors only
- ☐ 4. Resistors and capacitors

Question ID : 50389011081
Status : Answered
Chosen Option : 2

Q.33 Which of the following condition must be satisfied to measure the power delivered to a 3-phase load, using only 2 wattmeters?

- Ans
- ☒ 1. Load must be unbalanced
 - ☒ 2. Load must be connected to the source through 4-wires
 - ☒ 3. Load must be connected to the source through 3-wires
 - ☒ 4. Load must be balanced

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Question ID : 50389011107

Status : Answered

Chosen Option : 3

Q.34 Which of the following characteristic is not desirable in measuring instrument?

- Ans
- ☒ 1. Drift
 - ☒ 2. Accuracy
 - ☒ 3. Repeatability
 - ☒ 4. Linearity

Question ID : 50389011105

Status : Answered

Chosen Option : 1

Q.35 Which of the following device does not belong to thyristor family?

- Ans
- ☒ 1. UJT
 - ☒ 2. GTO
 - ☒ 3. SITH
 - ☒ 4. RCT

Question ID : 50389011077

Status : Answered

Chosen Option : 1

Q.36 In a hollow tube, if the velocity of air is constant everywhere inside the tube then the divergence of the velocity field is _____.

- Ans
- ☒ 1. Negative
 - ☒ 2. Zero
 - ☒ 3. Unity
 - ☒ 4. Infinite

Question ID : 50389011054

Status : Answered

Chosen Option : 2

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Q.37 For a synchronous generator supplying a balanced 3-phase load, the armature reaction flux is _____ in magnitude and rotates at _____ speed.

- Ans
- ☒ 1. Variable, Sub-synchronous
 - ☒ 2. Variable, Super-synchronous
 - ☒ 3. Constant, Synchronous
 - ☒ 4. Constant, Sub-synchronous

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Question ID : 50389011120

Status : Answered

Chosen Option : 3

Q.38 Which of the following equation is sometimes referred to as the Ohm's law of magnetic circuit?

- Ans
- ☒ 1. $B = \frac{\Phi}{A}$
 - ☒ 2. $H = \frac{NI}{l}$
 - ☒ 3. $\mu = \frac{B}{H}$
 - ☒ 4. $\Phi = \frac{NI}{S}$

Question ID : 50389011050

Status : Answered

Chosen Option : 3

Q.39 In the cathode ray tube, distance of _____ is minimum from the phosphor screen.

- Ans
- ☒ 1. X- Plates
 - ☒ 2. Grid
 - ☒ 3. Y-plates
 - ☒ 4. Cathode

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Question ID : 50389011103

Status : Answered

Chosen Option : 2

Q.40 Identify the non-renewable source of energy among the given option.

- Ans
- ☒ 1. Biomass energy
 - ☒ 2. Nuclear energy
 - ☒ 3. Solar energy
 - ☒ 4. Geothermal energy

Question ID : 50389011067

Status : Answered

Chosen Option : 2

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Q.41 If following Boolean expression is reduced, what will be the reduced result?

$$(B + BC)(B + \bar{B}C)(B + D)$$

- Ans
- ☒ 1. D
 - ☒ 2. C
 - ☒ 3. CD
 - ☒ 4. B

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Question ID : 50389011095

Status : Answered

Chosen Option : 4

Q.42 A conventional oscilloscope has a bandwidth of 100 MHz. The rise of the CRO is approximately _____.

- Ans
- ☒ 1. 3.5 ns
 - ☒ 2. 350 ns
 - ☒ 3. 0.35 ns
 - ☒ 4. 35 ns

Question ID : 50389011113

Status : Answered

Chosen Option : 1

Q.43 Which of the following system is linear?

- Ans
- ☒ 1. $Y(n) = |x(n)|$
 - ☒ 2. $Y(n) = e^{x(n)}$
 - ☒ 3. $Y(n) = \cos x(n)$
 - ☒ 4. $Y(n) = x(n) + n x(n+1)$

Question ID : 50389011064

Status : Answered

Chosen Option : 4

Q.44 Which of the following device is bidirectional?

- Ans
- ☒ 1. PUT
 - ☒ 2. SCS
 - ☒ 3. DIAC
 - ☒ 4. SUS

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Question ID : 50389011078

Status : Answered

Chosen Option : 3

Q.45 Which of the following is an example of static system?

Ans

☐ 1. $Y(n) = x(n^2)$

☐ 2. $Y(n) = x(-n)$

☐ 3. $y(n) = 3x(n) - x(n - 2)$

☒ 4. $y(n) = n x(n) + b x^2(n)$

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Question ID : 50389011063

Status : Answered

Chosen Option : 4

Q.46 While incorporating lead-compensation network, the gain factor of the amplifier is given as _____.

Ans

☒ 1. $\frac{1}{\alpha}$

☐ 2. α

☐ 3. α^2

☐ 4. $\frac{1}{\alpha^2}$

Question ID : 50389011101

Status : Answered

Chosen Option : 2

Q.47 With reference to the divergence, which of the following statement is WRONG?

Ans

☐ 1. Divergence operation can be represented by del operator

☒ 2. Divergence of a vector is a vector quantity

☐ 3. Divergence of a scalar has no meaning

☐ 4. Expressions for divergence in different co-ordinate systems are different

Question ID : 50389011056

Status : Answered

Chosen Option : 2

Q.48 Which of the following circuit is used to obtain pulse gate triggering?

Ans

☒ 1. UJT based relaxation oscillator circuit

☐ 2. Diac-Triac circuit

☐ 3. Resistance-capacitance triggering circuit

☐ 4. Resistive triggering circuit

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Question ID : 50389011085

Status : Answered

Chosen Option : 1

Q.49 Exponential signal is an example of _____ signal.

- Ans
- ☒ 1. Random and non-periodic
 - ☒ 2. Deterministic and periodic
 - ☒ 3. Deterministic and non-periodic
 - ☒ 4. Random and periodic

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Question ID : 50389011061

Status : Answered

Chosen Option : 3

Q.50 If a voltage $v = 10 \cos(100t + 30^\circ)$ is applied to a $50 \mu\text{F}$ capacitor, calculate the current through the capacitor.

- Ans
- ☒ 1. $50 \cos(100t - 30^\circ) \text{ mA}$
 - ☒ 2. $50 \cos(100t - 120^\circ) \text{ mA}$
 - ☒ 3. $50 \cos(100t + 120^\circ) \text{ mA}$
 - ☒ 4. $50 \cos(100t + 30^\circ) \text{ mA}$

Question ID : 50389011047

Status : Answered

Chosen Option : 3

Q.51 For a second order system having its transfer function as:

$$H(s) = 25 / (s^2 + 8s + 25)$$

Find the damping factor.

- Ans
- ☒ 1. 0.8
 - ☒ 2. 0.5
 - ☒ 3. 0.6
 - ☒ 4. 0.4

Question ID : 50389011100

Status : Answered

Chosen Option : 1

Q.52 A power amplifier supplies 50 W to an 8Ω speaker. Find ac output voltage and ac output current.

- Ans
- ☒ 1. 50 V, 1 A
 - ☒ 2. 25 V, 2 A
 - ☒ 3. 12.5 V, 4 A
 - ☒ 4. 20 V, 2.5 A

Question ID : 50389011091

Status : Answered

Chosen Option : 4

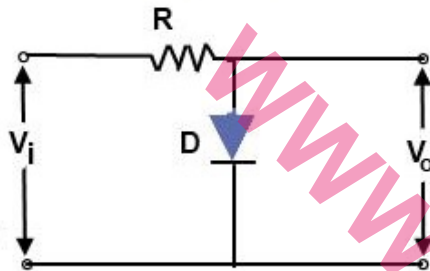
Q.53 As per force-voltage analogy, mass and viscous friction in mechanical translational system are analogous to _____ and _____ in electrical system, respectively.

- Ans
- ☒ 1. Resistance, capacitance
 - ☒ 2. Inductance, resistance
 - ☒ 3. Inductance, capacitance
 - ☒ 4. Capacitance, inductance

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Question ID : 50389011098
Status : Answered
Chosen Option : 2

Q.54 Following circuit is _____ clipper.



- Ans
- ☒ 1. Shunt positive
 - ☒ 2. Series positive
 - ☒ 3. Series negative
 - ☒ 4. Shunt negative

Question ID : 50389011088
Status : Answered
Chosen Option : 4

Q.55 An alternator has a per unit impedance of 0.9 p.u. to a base of 20 MVA, 33 kV, Then the p.u. impedance to the base of 60 MVA and 11 kV will be _____.

- Ans
- ☒ 1. 8.1
 - ☒ 2. 24.3
 - ☒ 3. 16.2
 - ☒ 4. 32.4

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Question ID : 50389011119
Status : Answered
Chosen Option : 2

Q.56 In a magnetic circuit, the ratio of flux to m.m.f represents _____.

- Ans
- ☒ 1. Reactance
 - ☒ 2. Permeance
 - ☒ 3. Resistance
 - ☒ 4. Reluctance

Question ID : 50389011049

Status : Answered

Chosen Option : 2

Q.57 A single phase half bridge inverter has a supply voltage of 100 V dc and a resistive load of 4 Ω . What will be the RMS output voltage?

- Ans
- ☒ 1. 50 V
 - ☒ 2. 45 V
 - ☒ 3. 90 V
 - ☒ 4. 70.71 V

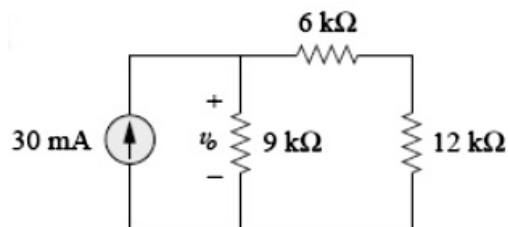
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Question ID : 50389011083

Status : Answered

Chosen Option : 4

Q.58 Calculate the power absorbed by the 9 k Ω resistor in following network.



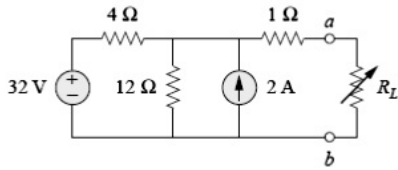
- Ans
- ☒ 1. 5.4 W
 - ☒ 2. 1.8 W
 - ☒ 3. 2.7 W
 - ☒ 4. 3.6 W

Question ID : 50389011044

Status : Answered

Chosen Option : 4

Q.59 Find the value of the Thevenin's resistance R_{TH} for the circuit to the left of terminals a-b:



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- Ans
- ☒ 1. $6\ \Omega$
 - ☒ 2. $4\ \Omega$
 - ☒ 3. $12\ \Omega$
 - ☒ 4. $14\ \Omega$

Question ID : 50389011046

Status : Answered

Chosen Option : 2

Q.60 In a 3-core cable there are _____ capacitances formed.

- Ans
- ☒ 1. 9
 - ☒ 2. 6
 - ☒ 3. 3
 - ☒ 4. 4

Question ID : 50389011072

Status : Answered

Chosen Option : 2

Q.61 The _____ states that, "The line integral of magnetic field intensity \vec{H} around a closed path is exactly is equal to the direct current enclosed by the path."

- Ans
- ☒ 1. Gauss's law
 - ☒ 2. Biot-Savart law
 - ☒ 3. Ampere's circuital law
 - ☒ 4. Poisson's law

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Question ID : 50389011057

Status : Answered

Chosen Option : 3

Q.62 In DC motor, the difference between armature torque and shaft torque is called _____ and is due to _____.

- Ans
- ☒ 1. Breakaway torque, copper losses
 - ☒ 2. Breakaway torque, friction losses
 - ☒ 3. Lost torque, iron and friction losses
 - ☒ 4. Lost torque, copper losses

Question ID : 50389011124

Status : Answered

Chosen Option : 4

Q.63 Which of the following is not a deterministic signal?

- Ans ☒ 1. Noise
☒ 2. Exponential wave
☒ 3. Cosine wave
☒ 4. Sine wave

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Question ID : 50389011060
 Status : Answered
 Chosen Option : 1

Q.64 A continuous time signal is said to be periodic if $x(t) = x(t + T_0)$. Here, T_0 is called

- Ans ☒ 1. Sampling period
☒ 2. Fundamental period
☒ 3. Starting period
☒ 4. Dummy period

Question ID : 50389011058
 Status : Answered
 Chosen Option : 2

Q.65 A single phase half wave controlled rectifier is supplied through a 230 V, 50 Hz supply. What will be the maximum output voltage possible?

- Ans ☒ 1. $\frac{230}{2\pi}$
☒ 2. $\frac{230}{\pi}$
☒ 3. $\frac{\sqrt{2} \times 230}{2\pi}$
☒ 4. $\frac{\sqrt{2} \times 230}{\pi}$

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Question ID : 50389011084
 Status : Answered
 Chosen Option : 3

Q.66 In case of scaling of vector, let α be the scalar with which the vector is multiplied. If $\alpha = -1$. It means

- Ans ☒ 1. Magnitude remains same and direction of the vector reverses
☒ 2. Magnitude becomes zero and direction of the vector reverses
☒ 3. Magnitude changes and direction of the vector remains same
☒ 4. Magnitude and direction of the vector, both remain same

Question ID : 50389011053
 Status : Answered
 Chosen Option : 1

Q.67 A 3-phase 4 pole induction motor is supplied from a 50 Hz source. Find the rotor frequency when the rotor runs at 600 rpm.

- Ans
- ☒ 1. 20 Hz
 - ☒ 2. 25 Hz
 - ☒ 3. 50 Hz
 - ☒ 4. 30 Hz

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Question ID : 50389011118

Status : Answered

Chosen Option : 4

Q.68 Dual of Norton's theorem is _____.

- Ans
- ☒ 1. Maximum power transfer theorem
 - ☒ 2. Thevenin's theorem
 - ☒ 3. Superposition theorem
 - ☒ 4. Millman's theorem

Question ID : 50389011041

Status : Answered

Chosen Option : 2

Q.69 Calculate the resolution of a 3-digit 0 – 1 V digital voltmeter.

- Ans
- ☒ 1. 0.1
 - ☒ 2. 0.001
 - ☒ 3. 0.01
 - ☒ 4. 0.0001

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Question ID : 50389011109

Status : Answered

Chosen Option : 2

Q.70 A single-phase transformer has 200 primary and 700 secondary turns. If the primary voltage is 100 V, find the secondary voltage.

- Ans
- ☒ 1. 350 V
 - ☒ 2. 700 V
 - ☒ 3. 28.5 V
 - ☒ 4. 175 V

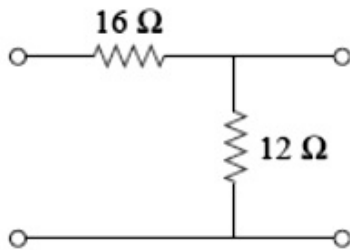
Question ID : 50389011115

Status : Answered

Chosen Option : 1

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Q.71 Find the value of Z_{11} for the following network.



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- Ans
- ☒ 1. $12\ \Omega$
 - ☒ 2. $28\ \Omega$
 - ☒ 3. $4\ \Omega$
 - ☒ 4. $16\ \Omega$

Question ID : 50389011045

Status : Answered

Chosen Option : 2

Q.72 For a 3-phase semiconverter, if the firing angle for thyristor is 90° , the free-wheeling diode will conduct for a period of _____

- Ans
- ☒ 1. 90°
 - ☒ 2. 30°
 - ☒ 3. 0°
 - ☒ 4. 120°

Question ID : 50389011086

Status : Answered

Chosen Option : 3

Q.73 Find the z-transform of $x(n) = \left(\frac{1}{2}\right)^n u(-n)$

- Ans
- ☒ 1. $X(Z) = \frac{1}{1-2Z}$
 - ☒ 2. $X(Z) = \frac{1}{Z+2}$
 - ☒ 3. $X(Z) = \frac{1}{1+2Z}$
 - ☒ 4. $X(Z) = \frac{1}{Z-2}$

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Question ID : 50389011065

Status : Answered

Chosen Option : 1

Q.74 The directional element in the reactance relay is so designed that its maximum torque angle is _____.

- Ans
- ☒ 1. 60°
 - ☒ 2. 90°
 - ☒ 3. 0°
 - ☒ 4. 120°

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Question ID : 50389011074

Status : Answered

Chosen Option : 1

Q.75 A 200 kVA single phase transformer with a voltage ratio of 6600/660 V has following winding resistances:

$$R_1 = 1.75 \, \Omega \text{ and } R_2 = 0.015 \, \Omega.$$

Find the resistance referred to the high voltage winding.

- Ans
- ☒ 1. $1.90 \, \Omega$
 - ☒ 2. $16.75 \, \Omega$
 - ☒ 3. $1.60 \, \Omega$
 - ☒ 4. $3.25 \, \Omega$

Question ID : 50389011123

Status : Answered

Chosen Option : 4

Q.76 The critical point $(-1, j0)$ is mapped to _____ on the Nichols chart.

- Ans
- ☒ 1. (1 dB, 0°)
 - ☒ 2. (1 dB, 180°)
 - ☒ 3. (0 dB, 0°)
 - ☒ 4. (0 dB, -180°)

Question ID : 50389011102

Status : Answered

Chosen Option : 4

Q.77 In wire-wound standard resistor, the bifilar winding is adopted to reduce _____.

- Ans
- ☒ 1. Self-inductive effect
 - ☒ 2. Aging effect
 - ☒ 3. Stray capacitance
 - ☒ 4. Skin effect

Question ID : 50389011111

Status : Answered

Chosen Option : 3

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Q.78 Which of the following is NOT a VALID advantage of shell type transformer over core type transformer?

- Ans ☒ 1. Maintenance is easy
☒ 2. Copper requirement is less
☒ 3. Losses are less
☒ 4. Mechanical strength is high

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Question ID : 50389011114
Status : Answered
Chosen Option : 4

Q.79 In an oil circuit breaker, due to heat the oil decomposes and the gases are liberated. Which of the following gas is usually NOT liberated in this process?

- Ans ☒ 1. Hydrogen
☒ 2. Acetylene
☒ 3. Ammonia
☒ 4. Methane

Question ID : 50389011076
Status : Answered
Chosen Option : 2

Q.80 Which of the following operation of the discrete time system is NOT memoryless?

- Ans ☒ 1. Constant multiplier
☒ 2. Unit delay
☒ 3. Adder
☒ 4. Signal multiplier

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Question ID : 50389011062
Status : Answered
Chosen Option : 2

Q.81 Which of the following is not a VALID advantage of digital filters over analog filters?

- Ans ☒ 1. Higher bandwidth
☒ 2. Linear phase response
☒ 3. Higher flexibility
☒ 4. Less maintenance

Question ID : 50389011066
Status : Answered
Chosen Option : 2

Q.82 A 220 V DC shunt motor runs at 630 rpm when the armature current is 50 A. Find the speed if the torque is doubled. Assume armature resistance = 0.2 Ω .

- Ans
- ☒ 1. 630 rpm
 - ☒ 2. 315 rpm
 - ☒ 3. 157 rpm
 - ☒ 4. 600 rpm

Question ID : 50389011117
Status : Answered
Chosen Option : 4

Q.83 In a coal based thermal power plant, electrostatic precipitator is required for:

- Ans
- ☒ 1. Coal handling
 - ☒ 2. Coal preparation
 - ☒ 3. Ash handling
 - ☒ 4. Coal firing

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Question ID : 50389011068
Status : Answered
Chosen Option : 3

Q.84 With reference to wave windings used for DC generator, state whether the following statements are TRUE or FALSE. 1. Wave winding is used for high current, low voltage machines. 2. The efficiency of wave winding is higher as compared to lap winding

- Ans
- ☒ 1. FALSE, FALSE
 - ☒ 2. TRUE, TRUE
 - ☒ 3. FALSE, TRUE
 - ☒ 4. TRUE, FALSE

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Question ID : 50389011122
Status : Answered
Chosen Option : 3

Q.85 A Thevenin's circuit has $V_{TH} = 20$ V and $R_{TH} = 20$ Ω . Find the maximum power transferred to a load resistance of 20 Ω .

- Ans
- ☒ 1. 4 W
 - ☒ 2. 5 W
 - ☒ 3. 8 W
 - ☒ 4. 10 W

Question ID : 50389011048
Status : Answered
Chosen Option : 2

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