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(भारत सरकार का उद्यम)  
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Participant ID	
Participant Name	
Test Center Name	
Test Date	17/12/2020
Test Time	9:00 AM - 11:00 AM
Subject	DIPLOMA TRAINEE (ELECTRICAL)

Section : Unit-1: General English

Q.1 From the options given below choose the proper suitable Articles and fill in the blanks.

We went to \_\_\_\_\_ school by \_\_\_\_\_ bike.

- Ans
- ☒ 1. a, an
  - ☒ 2. an, the
  - ☒ 3. the, an
  - ☒ 4. the, the

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Question ID : 600929726

Status : Answered

Chosen Option : 4

Q.2 Choose an appropriate answer from the options given below.

The word genuine most likely means?

- Ans
- ☒ 1. honest
  - ☒ 2. true
  - ☒ 3. appropriate
  - ☒ 4. authentic

Question ID : 600929731

Status : Answered

Chosen Option : 4

Q.3 Choose an appropriate answer from the options given below.

The festival was bright and colourful, but Danish's clothes were PALLID and lacked vibrancy.

What is the definition of PALLID?

- Ans
- ☒ 1. unaware
  - ☒ 2. dull
  - ☒ 3. hostile
  - ☒ 4. dry

Question ID : 600929732

Status : Not Answered

Chosen Option : --

Q.4 Choose an appropriate answer from the options given below.

What is an exaggerated fear of something called?

- Ans
- ☒ 1. neur
  - ☒ 2. scope
  - ☒ 3. strength
  - ☒ 4. phobia

Question ID : 600929730

Status : Not Answered

Chosen Option : --

Q.5 From the options given below choose the proper suitable Articles and fill in the blanks.

\_\_\_\_\_ teacher and \_\_\_\_\_ guardian of the lad were discussing his case.

- Ans
- ☒ 1. the, a
  - ☒ 2. a, a
  - ☒ 3. the, the
  - ☒ 4. a, the

Question ID : 600929727

Status : Answered

Chosen Option : 3

Q.6 From the options given below choose the proper suitable prepositions and fill in the blanks.

It is difficult to agree \_\_\_\_\_ those critics who ascribe the work of shakespeare \_\_\_\_\_ Bacon.

- Ans
- ☒ 1. of, with
  - ☒ 2. with, to
  - ☒ 3. over, to
  - ☒ 4. to, on

Question ID : 600929729

Status : Answered

Chosen Option : 2

Q.7 From the options given below choose the proper suitable preposition and fill in the blank.

America has raised a tariff wall to protect home industries \_\_\_\_\_ foreign.

- Ans
- ☒ 1. from
  - ☒ 2. on
  - ☒ 3. for
  - ☒ 4. off

Question ID : 600929728

Status : Answered

Chosen Option : 1

Q.8 From the options given below choose the proper suitable Article and fill in the blank.

I have come without \_\_\_\_\_ umbrella.

- Ans ☒ 1. an  
☐ 2. not required  
☐ 3. a  
☐ 4. the

Question ID : 600929725

Status : Answered

Chosen Option : 1

**Comprehension:**

Read the following passage and answer the questions.

Stephen Irwin was a famous Australian television personality, wildlife expert, and conservationist. Born on 22 February 1962 in Essendon, Australia, he grew up in the wild life park of his parents. There he mastered the technique of catching and managing crocodiles. He worked on the world famous television series, The Crocodile Hunter; in fact, he got his pseudonym from the title of the series.

Even though he did not have any formal education or degree in his field, he was acclaimed as a wildlife expert the world over. He died in 2006 after being pierced by a stingray off Australia's Great Barrier Reef.

**SubQuestion No : 9**

Q.9 Where did he get his degree from?

- Ans ☐ 1. Great Barrier Reef  
☐ 2. Essendon, Australia  
☒ 3. he had no formal degree  
☐ 4. overseas

Question ID : 600929735

Status : Answered

Chosen Option : 3

**Comprehension:**

Read the following passage and answer the questions.

Stephen Irwin was a famous Australian television personality, wildlife expert, and conservationist. Born on 22 February 1962 in Essendon, Australia, he grew up in the wild life park of his parents. There he mastered the technique of catching and managing crocodiles. He worked on the world famous television series, The Crocodile Hunter; in fact, he got his pseudonym from the title of the series.

Even though he did not have any formal education or degree in his field, he was acclaimed as a wildlife expert the world over. He died in 2006 after being pierced by a stingray off Australia's Great Barrier Reef.

**SubQuestion No : 10**

Q.10 Who was Stephen Irwin?

- Ans ☐ 1. a crocodile lover  
☒ 2. conservationist  
☐ 3. famous television actor  
☐ 4. wildlife analyst

Question ID : 600929734

Status : Answered

Chosen Option : 4

**Comprehension:**

Read the following passage and answer the questions.

Stephen Irwin was a famous Australian television personality, wildlife expert, and conservationist. Born on 22 February 1962 in Essendon, Australia, he grew up in the wild life park of his parents. There he mastered the technique of catching and managing crocodiles. He worked on the world famous television series, The Crocodile Hunter; in fact, he got his pseudonym from the title of the series.

Even though he did not have any formal education or degree in his field, he was acclaimed as a wildlife expert the world over. He died in 2006 after being pierced by a stingray off Australia's Great Barrier Reef.

**SubQuestion No : 11**

**Q.11** What was the pseudonym he got?

- Ans
- ☒ 1. television personality
  - ☒ 2. the crocodile hunter
  - ☒ 3. conservationist
  - ☒ 4. wildlife expert

Question ID : 600929736

Status : Answered

Chosen Option : 2

**Q.12** Parts of a sentence are given in jumbled order. Arrange the parts in the right order to form a meaningful sentence.

- A : very first time  
B : to Agra to see the  
C : we went  
D : Taj Mahal for the

- Ans
- ☒ 1. DCAB
  - ☒ 2. ABCD
  - ☒ 3. CDBA
  - ☒ 4. CBDA

Question ID : 600929739

Status : Answered

Chosen Option : 4

**Q.13** Parts of a sentence are given in jumbled order. Arrange the parts in the right order to form a meaningful sentence.

- A : important meeting with  
B : other monitors and  
C : you have to attend  
D : the teachers after school  
E : as the monitor of your class.

- Ans
- ☒ 1. EACDB
  - ☒ 2. ABDEC
  - ☒ 3. CABED
  - ☒ 4. ECABD

Question ID : 600929740

Status : Answered

Chosen Option : 3

Q.14 Choose the correct synonym for the following word from the following given options.

DANK

- Ans ☒ 1. arid  
☒ 2. dry  
☒ 3. clammy  
☒ 4. parched

Question ID : 600929738

Status : Not Answered

Chosen Option : --

Q.15 Choose the correct synonym for the following word from the following given options.

CANDID

- Ans ☒ 1. biased  
☒ 2. sincere  
☒ 3. devious  
☒ 4. tactful

Question ID : 600929737

Status : Not Answered

Chosen Option : --

Section : Unit-2: Reasoning

Q.1 RAJINDER is coded as 1-2-3-4-5-6-7-8 and RAVINDER is coded as 1-2-9-4-5-6-7-8, than how will you code VIJENDER?

- Ans ☒ 1. 9-4-1-7-5-6-7-8  
☒ 2. 9-4-1-7-5-3-7-8  
☒ 3. 9-4-3-7-5-1-7-8  
☒ 4. 9-4-3-7-5-6-7-8

Question ID : 600929743

Status : Answered

Chosen Option : 4

Q.2 According to the first pattern of numbers find the value of D in second similar pattern.

15, 31, 11, 23, 5, 11  
21, 43, A, B, C, D, E

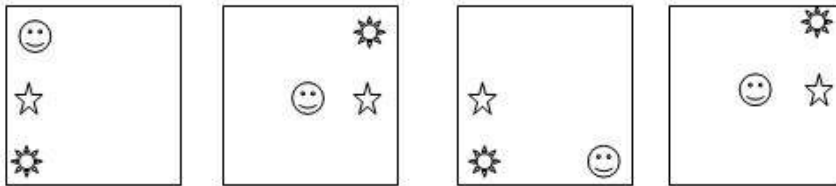
- Ans ☒ 1. 19  
☒ 2. 21  
☒ 3. 23  
☒ 4. 15

Question ID : 600929754

Status : Answered

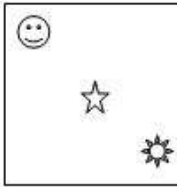
Chosen Option : 3

Q.3 What will be next figure in the series:

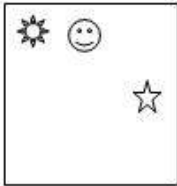


Ans

☒ 1.



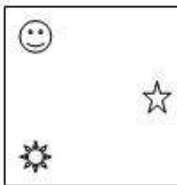
☒ 2.



☒ 3.



☒ 4.



Question ID : 600929747

Status : Answered

Chosen Option : 3

Q.4 Premises:

1. No Dogs are Grey
2. All Elephants are Grey

From the above premises, which one of the following conclusions is true.

Ans

☒ 1. No conclusion can be drawn

☒ 2. No Elephants are Dogs

☒ 3. Some Elephants are not Dogs

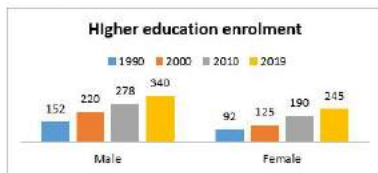
☒ 4. Some Dogs are not Elephants

Question ID : 600929745

Status : Answered

Chosen Option : 1

Q.5 Higher education enrolment in Ravi college in the past four years, in which year the percentage of female candidate as of total candidate is 2nd largest among all the four years present.



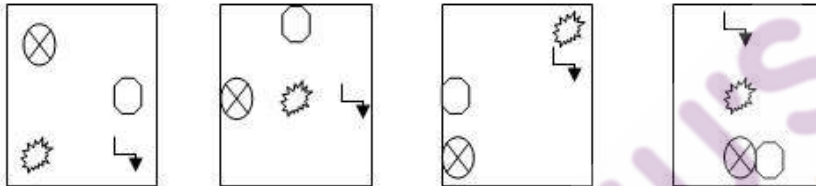
- Ans
- ☒ 1. 1990
  - ☒ 2. 2000
  - ☒ 3. 2010
  - ☒ 4. 2019

Question ID : 600929741

Status : Not Answered

Chosen Option : --

Q.6 What will be next in the Series:



Ans

- ☒ 1.
- ☒ 2.
- ☒ 3.
- ☒ 4.

Question ID : 600929748

Status : Answered

Chosen Option : 2

Q.7 A1B1, I3J9, U5V21,....., E2F5 find the missing link in the given pattern.

- Ans
- ☒ 1. 05P15
  - ☒ 2. 04P15
  - ☒ 3. 09P14
  - ☒ 4. 06P16

Question ID : 600929755  
Status : Answered  
Chosen Option : 3

Q.8 In a row of girls, if Seeta who is 7th from the left and Leena who is 9th from the right interchange their seats, Seeta becomes 11th from the left. How many girls are there in the row?

- Ans
- ☒ 1. 19
  - ☒ 2. 16
  - ☒ 3. 17
  - ☒ 4. 21

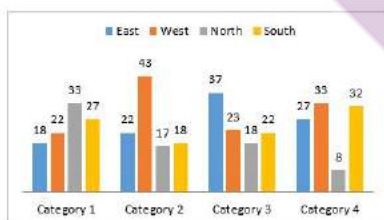
Question ID : 600929752  
Status : Answered  
Chosen Option : 4

Q.9 16, 17, 21, 30, 46, 71,....., find the NEXT number in the series.

- Ans
- ☒ 1. 97
  - ☒ 2. 104
  - ☒ 3. 91
  - ☒ 4. 107

Question ID : 600929751  
Status : Answered  
Chosen Option : 4

Q.10 In all the four zones of India, the sales of scooters (in percentage) in four categories are as given in chart. If the sale under category 1 is 4593 and under category 3 is 3297, then what percent east zone of category 1 is of west zone of category 3.



- Ans
- ☒ 1. 91.72%
  - ☒ 2. 119.02%
  - ☒ 3. 109.02%
  - ☒ 4. 99.72%

Question ID : 600929742  
Status : Not Answered  
Chosen Option : --



Q.11 If COPY = 2-4-15-24 and PEN = 15-2-13 then SCALE = ?

- Ans
- ☒ 1. 19-2-1-11-4
  - ☒ 2. 18-2-1-11-2
  - ☒ 3. 19-1-2-11-4
  - ☒ 4. 18-2-1-11-4

Question ID : 600929744

Status : Answered

Chosen Option : 4

Q.12 Two statements are given under followed by two conclusions I and II. You have to consider these statements to be true, even if they seem at variance from commonly known facts. Decide which of the given conclusions logically follow/s from the given statement.

Statements:

1. All pens are schools.
2. All schools are scales.

Conclusions:

- I. All pens are scales
- II. Some schools are not pens

- Ans
- ☒ 1. Neither conclusion I nor II follows
  - ☒ 2. Only conclusion I follows
  - ☒ 3. Either conclusion I or II follows
  - ☒ 4. Only conclusion II follows

Question ID : 600929746

Status : Answered

Chosen Option : 1

Q.13 The question below consists of a question followed by two statements labeled as 1 and 2. You have to decide whether these statements are sufficient to answer the question.

Question: Six persons P, Q, R, S, T, U are sitting in a row facing north. P and U are sitting at two extreme ends of the row. Q is to the immediate right of P and S is 2nd left of U. What is the position of T with respect to P?

1. T is to the right of P.
2. T is to the left of R.

- Ans
- ☒ 1. If you can get the answer from 1 and 2 together.
  - ☒ 2. If statement 2 alone is sufficient to answer the question but statement 1 alone is not sufficient to answer
  - ☒ 3. If statement 1 alone is sufficient to answer the question but statement 2 alone is not sufficient to answer
  - ☒ 4. If you cannot get the answer from 1 and 2 together, still more data is required

Question ID : 600929750

Status : Answered

Chosen Option : 3

Q.14 The question below consists of a question followed by two statements labeled as 1 and 2. You have to decide whether these statements are sufficient to answer the question.

Question: What is the value of  $X+Y$ ?

Statements:

1.  $X - 2Y = 5$

2.  $X^2 - 25 = 4XY - 4Y^2$

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- Ans
- ☒ 1. If statement 2 alone is sufficient to answer the question but statement 1 alone is not sufficient to answer
  - ☒ 2. If you can get the answer from 1 and 2 together
  - ☒ 3. If you cannot get the answer from 1 and 2 together, still more data is required
  - ☒ 4. If statement 1 alone is sufficient to answer the question but statement 2 alone is not sufficient to answer

Question ID : 600929749

Status : Not Answered

Chosen Option : --

Q.15 Raj starts from his office facing west and walks 100 mt. straight takes a right turn and walks 100 mt. Further, he takes a left turn and walks 50 mt. In which direction is Raj now from the starting point.

- Ans
- ☒ 1. North
  - ☒ 2. North-West
  - ☒ 3. South-West
  - ☒ 4. North-East

Question ID : 600929753

Status : Answered

Chosen Option : 2

Section : Unit-3: Quantitative Aptitude

Q.1 Two fair dice are thrown once and the numbers appearing on their tops are multiplied. What is the probability that the product is a prime number or it is divisible by 10?

- Ans
- ☒ 1.  $\frac{1}{6}$
  - ☒ 2.  $\frac{11}{36}$
  - ☒ 3.  $\frac{1}{3}$
  - ☒ 4.  $\frac{5}{18}$

Question ID : 600929775

Status : Not Answered

Chosen Option : --

Q.2 To complete a certain work, A and B together take 15 days; B and C together take 12 days, and C and A together take 10 days. All the three worked together for 6 days, then B and C left. A alone will complete the remaining work in:

Ans ☒ 1. 6 days

☐ 2.  $8\frac{1}{2}$  days

☐ 3. 9 days

☐ 4.  $7\frac{1}{2}$  days

Question ID : 600929759

Status : Answered

Chosen Option : 1

Q.3 A person bought goods for Rs. 8000. He sells 40% of the goods at 5% loss and 20% of the remaining at 10% gain. At what percent profit must he sell the remaining goods so as to gain 15% on the whole transaction? (nearest to an integer)

Ans ☒ 1. 33

☐ 2. 35

☐ 3. 30

☐ 4. 28

Question ID : 600929766

Status : Not Answered

Chosen Option : --

Q.4 A number is chosen at random from 3-digit positive integers. What is the probability that the number chosen is a multiple of 5?

Ans ☐ 1.  $\frac{2}{9}$

☒ 2.  $\frac{1}{5}$

☐ 3.  $\frac{17}{90}$

☐ 4.  $\frac{7}{36}$

Question ID : 600929774

Status : Answered

Chosen Option : 2

Q.5 Amita decides to donate 16% of her monthly income to a charitable trust. On the day of donation, she changes her decision and donates a sum of Rs. 3600, which is equal to 120% of what she decided to donate earlier. What is her monthly income (in Rs.)?

Ans ☐ 1. 18800

☐ 2. 18600

☒ 3. 18750

☐ 4. 18540

Question ID : 600929770

Status : Answered

Chosen Option : 4

Q.6 Pipes A and B can fill a tank in 6 hours and 8 hours, respectively while pipe C alone can empty the full tank in 12 hours. A and B are opened together for 2 hours and then C is also opened. The total time (in hours) taken to fill the tank completely is:

- Ans
- ☐ 1. 5
  - ☐ 2. 7
  - ☐ 3. 6
  - ☒ 4. 4

Question ID : 600929761

Status : Not Answered

Chosen Option : --

Q.7 Out of 75 students in a class, 60% are boys and rest are girls. The average score of girls in a test is 40% more than that of boys. If the average score of all the students in the class is 58, then what is the average score of girls?

- Ans
- ☐ 1. 67.2
  - ☐ 2. 63.8
  - ☒ 3. 70
  - ☐ 4. 50

Question ID : 600929771

Status : Not Answered

Chosen Option : --

Q.8 A purse contains coins of Rs. 1, Rs. 2 and Rs. 5 only in the ratio 12 : 5 : 3. If the total amount in the purse is Rs. 1813, then the number of Rs. 2 coins is:

- Ans
- ☐ 1. Rs. 264
  - ☐ 2. Rs. 294
  - ☒ 3. Rs. 245
  - ☐ 4. Rs. 280

Question ID : 600929760

Status : Not Answered

Chosen Option : --

Q.9 A boat can go 7.2 km downstream and 3.2 km upstream in 2 hours. It can also go 3 km downstream and 1.2 km upstream in 48 minutes. In how much time (in hours) will it cover a distance of 43.2 km downstream?

- Ans
- ☐ 1. 7.6
  - ☒ 2. 7.2
  - ☐ 3. 8.2
  - ☐ 4. 6.8

Question ID : 600929764

Status : Not Answered

Chosen Option : --

Q.10 'A' sold an article to 'B' at 20% profit and 'B' sold it to 'C' at a loss of 35%. 'C' sold the article to 'D' at 40% profit. If 'D' bought it for Rs. 218.40, then what is the difference (in Rs.) between the profits of 'A' and 'C'?

- Ans
- ☒ 1. 23.60
  - ☒ 2. 22.40
  - ☒ 3. 25.80
  - ☒ 4. 24.20

Question ID : 600929765

Status : Answered

Chosen Option : 2

Q.11 The incomes of X and Y are in the ratio 3:5 and the ratio of their savings is 11:20. If the income of X is equal to the savings of Y, then the ratio of the expenditures of X and Y is:

- Ans
- ☒ 1. 9 : 20
  - ☒ 2. 27 : 40
  - ☒ 3. 2 : 3
  - ☒ 4. 3 : 5

Question ID : 600929758

Status : Not Answered

Chosen Option : --

Q.12 A shopkeeper allows  $15\frac{5}{8}\%$  discount on the marked price of an article. What price should he mark on the article costing Rs. 238.50 so that he makes a profit of 35%?

- Ans
- ☒ 1. Rs. 381.60
  - ☒ 2. Rs. 392.80
  - ☒ 3. Rs. 368.40
  - ☒ 4. Rs. 396.50

Question ID : 600929768

Status : Not Answered

Chosen Option : --

Q.13 A sum of Rs.  $x$  is divided between A, B, C and D such that (A's share) : (B's share) = (B's share) : (C's share) = (C's share) : (D's share) = 2:3. If the difference between the shares of B and D is Rs. 2424, then the value of  $x$  is:

- Ans
- ☒ 1. 10908
  - ☒ 2. 10504
  - ☒ 3. 9696
  - ☒ 4. 12120

Question ID : 600929757

Status : Not Answered

Chosen Option : --

Q.14 Five years ago, the ratio of ages of A and B was 4 : 5. Fifteen years from now, the ratio of their ages will be 8 : 9. The ratio of their present ages is:

- Ans
- ☒ 1. 5 : 6
  - ☐ 2. 6 : 7
  - ☐ 3. 7 : 8
  - ☐ 4. 2 : 3

Question ID : 600929756

Status : Not Answered

Chosen Option : --

Q.15 An unbiased coin is tossed three times. What is the probability of getting at least two heads?

- Ans
- ☐ 1.  $\frac{1}{4}$
  - ☐ 2.  $\frac{5}{8}$
  - ☐ 3.  $\frac{3}{4}$
  - ☒ 4.  $\frac{1}{2}$

Question ID : 600929773

Status : Answered

Chosen Option : 3

Q.16 A train of length 318 m crosses a bridge of length 882 m in 90 seconds. How much time will it take to cover a distance of 128 km with the same speed?

- Ans
- ☐ 1. 2 hours 30 minutes
  - ☒ 2. 2 hours 40 minutes
  - ☐ 3. 3 hours 40 minutes
  - ☐ 4. 3 hours 20 minutes

Question ID : 600929762

Status : Answered

Chosen Option : 2

Q.17 Sujatha marks an article 40% above the cost price. She sells it offering two successive discounts of 20% and 25% on the marked price and she suffers a loss of Rs. 83.20. If she sells the article at 75% of the marked price, (without offering any discount), then her profit is:

- Ans
- ☐ 1. Rs. 42
  - ☐ 2. Rs. 32
  - ☒ 3. Rs. 26
  - ☐ 4. Rs. 36

Question ID : 600929767

Status : Not Answered

Chosen Option : --

**Q.18** Raghu covered a distance of 350 km at a certain speed. Had his speed been 25% less, he would have covered the same distance in  $1\frac{3}{4}$  hours more time. His speed (in km/h), initially, was:

Ans

☒ 1.  $66\frac{2}{3}$

☐ 2. 60

☐ 3.  $56\frac{2}{3}$

☐ 4. 72

Question ID : 600929763

Status : Not Answered

Chosen Option : --

**Q.19** A is 20% more than B, B is 18% less than C and C is 30% more than D. Which one of the following is true?

Ans

☐ 1. D is 6.6% less than B

☐ 2. A is 2.08% less than C

☒ 3. A is 27.92% more than D

☐ 4. C is 23.4% more than B

Question ID : 600929769

Status : Not Answered

Chosen Option : --

**Q.20** The average weight of n persons in a group was 68.4 kg. Later on, 5 persons having weights 59.2 kg, 60.4 kg, 62 kg, 76.4 kg and 78 kg joined the group. As a result, the average weight of all persons in the group decreased by 0.12 kg. The value of n is:

Ans

☐ 1. 50

☐ 2. 40

☐ 3. 35

☒ 4. 45

Question ID : 600929772

Status : Not Answered

Chosen Option : --

Section : Unit-4: Electrical Engineering

**Q.1** A phasor is a complex number that represents \_\_\_\_\_ of a sinusoid.

Ans

☐ 1. Only phase

☐ 2. Only frequency

☐ 3. Only amplitude

☒ 4. The amplitude and phase

Question ID : 600929807

Status : Answered

Chosen Option : 4

Q.2 As per ISI, in a building, the illumination level required for kitchen is:

- Ans
- ☒ 1. 200 lux
  - ☐ 2. 100 lux
  - ☐ 3. 50 lux
  - ☐ 4. 150 lux

Question ID : 600929890

Status : Not Answered

Chosen Option : --

Q.3 In a circuit, voltage and current are given by  $V = 10 \sin(\omega t + 30^\circ)$  and  $I = 10 \sin(\omega t - 30^\circ)$ . Calculate the power consumed in this circuit:

- Ans
- ☐ 1. 100 W
  - ☐ 2. 50 W
  - ☐ 3. 15 W
  - ☒ 4. 25 W

Question ID : 600929811

Status : Answered

Chosen Option : 4

Q.4 All synchronous generators are invariably \_\_\_\_\_.

- Ans
- ☒ 1. 3-phase star connected machines
  - ☐ 2. 1-phase delta connected machines
  - ☐ 3. 3-phase delta connected machines
  - ☐ 4. 1-phase star connected machines

Question ID : 600929831

Status : Answered

Chosen Option : 1

Q.5 A 460 V series motor runs at 500 rpm taking a current of 40 A. Calculate the percentage change in torque if the load is changed so that the motor takes 30 A.

- Ans
- ☐ 1. 31.25%
  - ☐ 2. 56.25%
  - ☒ 3. 43.75%
  - ☐ 4. 68.75%

Question ID : 600929826

Status : Not Answered

Chosen Option : --

Q.6 The steady-state error due to unit step input to a type-1 system is:

- Ans
- ☐ 1.  $1/(1 + k_p)$
  - ☒ 2. Zero
  - ☐ 3.  $1/K_p$
  - ☐ 4. Infinity

Question ID : 600929884

Status : Answered

Chosen Option : 1



Q.7 Which of the following voltage level is a valid secondary voltage distribution system?

- Ans
- ☐ 1. 33 kV / 11 kV
  - ☐ 2. 6.6 kV / 3.3 kV
  - ☒ 3. 415 V / 240 V
  - ☐ 4. 3.3 kV / 415 V

Question ID : 600929848

Status : Answered

Chosen Option : 3

Q.8 A travelling wave 400/1/50 means crest value of \_\_\_\_\_.

- Ans
- ☐ 1. 400 V with rise time of 1/50 s
  - ☐ 2. 400 kV with rise time 1 s and fall time 50 s
  - ☒ 3. 400 kV with rise time 1  $\mu$ s and fall time 50  $\mu$ s
  - ☐ 4. 400 MV with rise time 1  $\mu$ s and fall time 50  $\mu$ s

Question ID : 600929873

Status : Not Answered

Chosen Option : --

Q.9 If  $v(t) = 12 \cos(50t + 10^\circ)$  is the expression of a sinusoidal voltage, find the maximum amplitude.

- Ans
- ☐ 1. 24
  - ☒ 2. 12
  - ☐ 3. 50
  - ☐ 4. 10

Question ID : 600929804

Status : Answered

Chosen Option : 2

Q.10 \_\_\_\_\_ conductors are most suitable for indoor and outdoor wires and cables.

- Ans
- ☐ 1. Aluminium
  - ☐ 2. Hard drawn copper
  - ☒ 3. Annealed copper
  - ☐ 4. Silver

Question ID : 600929888

Status : Answered

Chosen Option : 2

Q.11 Which one of the following matrices reveals the topology of the power system network?

- Ans
- ☐ 1. Primitive impedance matrix
  - ☐ 2. Bus impedance matrix
  - ☐ 3. Primitive admittance matrix
  - ☒ 4. Bus incidence matrix

Question ID : 600929877

Status : Not Answered

Chosen Option : --

Q.12 Which of the following is not correct for an open loop control system?

- Ans
- ☒ 1. Easy to maintain
  - ☒ 2. Has a feedback element
  - ☒ 3. Simple construction
  - ☒ 4. Less expensive

Question ID : 600929878  
Status : Answered  
Chosen Option : 2

Q.13 According to the latest practice, the land required for 132 kV substation is:

- Ans
- ☒ 1. 25 acres
  - ☒ 2. 10 acres
  - ☒ 3. 50 acres
  - ☒ 4. 5 acres

Question ID : 600929894  
Status : Answered  
Chosen Option : 1

Q.14 Peak value of fundamental component of mmf produced by one N-turn coil carrying 1 ampere current is:

- Ans
- ☒ 1.  $(4/\pi) * N$
  - ☒ 2.  $(1/2\pi) * N$
  - ☒ 3.  $(1/\pi) * N$
  - ☒ 4.  $(2/\pi) * N$

Question ID : 600929836  
Status : Answered  
Chosen Option : 2

Q.15 The term control system means:

- Ans
- ☒ 1. Any system
  - ☒ 2. A system with a provision for controlling the response
  - ☒ 3. A system having controlled input
  - ☒ 4. A system having zero error

Question ID : 600929879  
Status : Answered  
Chosen Option : 2

Q.16 Find the median if the given data set is:

3, 3, 7, 8, 12, 13, 16, 19

- Ans
- ☒ 1. 13
  - ☒ 2. 8
  - ☒ 3. 10
  - ☒ 4. 12

Question ID : 600929818  
Status : Not Answered  
Chosen Option : --

Q.17 The ripple factor of a half-wave rectifier is:

- Ans ☒ 1. 0.48  
☐ 2. 2  
☐ 3. 2.5  
☐ 4. 1.21

Question ID : 600929865  
Status : Answered  
Chosen Option : 4

Q.18 Which of the following application of electrolysis is not covered under electro-deposition?

- Ans ☒ 1. Electro-polishing  
☐ 2. Electro-facing  
☐ 3. Electroplating  
☐ 4. Electroforming

Question ID : 600929861  
Status : Not Answered  
Chosen Option : --

Q.19 The flowmeter which cannot measure bidirectional flow is:

- Ans ☐ 1. Ultrasonic flowmeter  
☒ 2. Turbine flowmeter  
☐ 3. Electromagnetic flowmeter  
☐ 4. Coriolis mass flowmeter

Question ID : 600929819  
Status : Not Answered  
Chosen Option : --

Q.20 Effect of increase in temperature in overhead transmission line is to:

- Ans ☐ 1. Increase the stress but decrease the length  
☐ 2. Decrease the stress and length  
☒ 3. Decrease the stress but increase the length  
☐ 4. Increase the stress and length

Question ID : 600929845  
Status : Answered  
Chosen Option : 4

Q.21 Open loop transfer function of a closed loop control system is defined as:

- Ans ☐ 1. Actuating signal / feedback signal  
☐ 2. Output / feedback signal  
☐ 3. Output / actuating signal  
☒ 4. Feedback signal / actuating signal

Question ID : 600929882  
Status : Not Attempted and Marked For Review  
Chosen Option : --

Q.22 A standard conductor cable is expressed as 3/0.029. The number of strands in the cable is:

- Ans
- ☒ 1. 6
  - ☒ 2. 9
  - ☒ 3. 3
  - ☒ 4. 7

Question ID : 600929851  
Status : Answered  
Chosen Option : 3

Q.23 The outermost orbit of a Germanium atom has \_\_\_\_\_ electrons.

- Ans
- ☒ 1. 16
  - ☒ 2. 4
  - ☒ 3. 18
  - ☒ 4. 8

Question ID : 600929778  
Status : Answered  
Chosen Option : 2

Q.24 What will be the Magnetomotive force in a coil having 250 turns and carrying a current of 10 A?

- Ans
- ☒ 1. 25000 AT
  - ☒ 2. 25 AT
  - ☒ 3. 250 AT
  - ☒ 4. 2500 AT

Question ID : 600929798  
Status : Answered  
Chosen Option : 4

Q.25 Which of the following factor is always greater than unity?

- Ans
- ☒ 1. Coincidence factor
  - ☒ 2. Load factor
  - ☒ 3. Use factor
  - ☒ 4. Diversity factor

Question ID : 600929840  
Status : Answered  
Chosen Option : 4

Q.26 In case of a copper atom, atomic weight is 64 and atomic number is 29. What will be the number of neutrons in a copper atom?

- Ans
- ☒ 1. 35
  - ☒ 2. 64
  - ☒ 3. 93
  - ☒ 4. 29

Question ID : 600929782  
Status : Answered  
Chosen Option : 1

Q.27 What should be the chording angle for eliminating 5th harmonic from the phase e.m.f. generated in the phase of a 3-phase alternator?

- Ans
- ☒ 1.  $1/5 \times \text{full-pitch}$
  - ☐ 2.  $2/5 \times \text{full-pitch}$
  - ☐ 3.  $3/5 \times \text{full-pitch}$
  - ☐ 4.  $5 \times \text{full-pitch}$

Question ID : 600929834  
Status : Answered  
Chosen Option : 2

Q.28 If the input frequency of a bridge rectifier is 100 Hz, then the output frequency will be:

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

Question ID : 600929866  
Status : Answered  
Chosen Option : 4

Q.29 The frequency of a sinusoidal signal is 50 Hz. What will be the period of the signal?

- Ans
- ☒ 1. 20 ms
  - ☐ 2. 30 ms
  - ☐ 3. 50 ms
  - ☐ 4. 10 ms

Question ID : 600929803  
Status : Answered  
Chosen Option : 1

Q.30 Which of the following part is not located inside the cathode ray tube of the CRO?

- Ans
- ☐ 1. Electron gun
  - ☒ 2. Time base generator
  - ☐ 3. Vertical deflection plates
  - ☐ 4. Horizontal deflection plates

Question ID : 600929812  
Status : Answered  
Chosen Option : 2

Q.31 The coefficient of reflection of voltage for a short circuited line is:

- Ans
- ☐ 1. 1.0
  - ☐ 2. 0
  - ☒ 3. - 1.0
  - ☐ 4. 2.0

Question ID : 600929843  
Status : Answered  
Chosen Option : 3

Q.32 Which of the following is not a valid advantage of bundle conductor?

Ans

- ☒ 1. Reduced reactance
- ☒ 2. Reduced voltage gradient
- ☒ 3. Reduced corona loss
- ☒ 4. Increased reactance

Question ID : 600929871

Status : Answered

Chosen Option : 4

Q.33 In USA, the power supply frequency is:

Ans

- ☒ 1. 60 Hz
- ☒ 2. 120 Hz
- ☒ 3. 50 Hz
- ☒ 4. 25 Hz

Question ID : 600929849

Status : Answered

Chosen Option : 1

Q.34 A Norton circuit with 10 A current source and  $15\ \Omega$  resistance is connected across a resistance of  $5\ \Omega$ . The current in  $5\ \Omega$  resistance will be:

Ans

- ☒ 1. 5 A
- ☒ 2. 2.5 A
- ☒ 3. 7.5 A
- ☒ 4. 10 A

Question ID : 600929790

Status : Answered

Chosen Option : 3

Q.35 The cross sectional area of Bourdon tube is:

Ans

- ☒ 1. Circular
- ☒ 2. Triangular
- ☒ 3. Rectangular
- ☒ 4. Elliptical

Question ID : 600929815

Status : Not Answered

Chosen Option : --

Q.36 Which of the following statement is CORRECT with reference to the process of Ionization?

Ans

- ☒ 1. Valence electron is removed from the atom.
- ☒ 2. Proton is added in to the nucleus.
- ☒ 3. Neutron is added in to the nucleus.
- ☒ 4. Proton is removed from the atom.

Question ID : 600929777

Status : Answered

Chosen Option : 1

Q.37 What will be the current in  $80\ \Omega$  resistor if it is connected to a supply of 220 V?

- Ans
- ☒ 1. 2.25 A
  - ☒ 2. 2.75 A
  - ☒ 3. 2.50 A
  - ☒ 4. 1.75 A

Question ID : 600929780  
Status : Answered  
Chosen Option : 2

Q.38 In a small flat there are 5 light points and 2 fan points. How many sub-circuits are required for the flat?

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

Question ID : 600929855  
Status : Answered  
Chosen Option : 4

Q.39 For a specific wiring in a building, the full load current is 10 A. what will be the maximum permissible leakage current?

- Ans
- ☒ 1. 0.008 A
  - ☒ 2. 0.002 A
  - ☒ 3. 0.005 A
  - ☒ 4. 0.003 A

Question ID : 600929892  
Status : Answered  
Chosen Option : 3

Q.40 Which of the following is most commonly used insulator material for overhead lines?

- Ans
- ☒ 1. Wood
  - ☒ 2. Steatite
  - ☒ 3. Glass
  - ☒ 4. Porcelain

Question ID : 600929891  
Status : Answered  
Chosen Option : 4

Q.41 Two coils having self-inductance of 10 H and 15 H are connected in series aiding connection. Find total inductance of the series connection, if the mutual inductance between the coils is 2.5 H.

- Ans
- ☒ 1. 22.5 H
  - ☒ 2. 27.5 H
  - ☒ 3. 30 H
  - ☒ 4. 25 H

Question ID : 600929801  
Status : Answered  
Chosen Option : 3

Q.42 The voltage of a particular bus can be controlled by controlling the \_\_\_\_\_.

- Ans
- ☒ 1. Reactive power of the bus
  - ☐ 2. Active power of the bus
  - ☐ 3. Phase angle
  - ☐ 4. Phase angle and reactive power

Question ID : 600929870  
Status : Answered  
Chosen Option : 4

Q.43 Street lighting is an example of \_\_\_\_\_.

- Ans
- ☐ 1. Irrigation load
  - ☐ 2. Traction load
  - ☒ 3. Municipal load
  - ☐ 4. Residential load

Question ID : 600929839  
Status : Answered  
Chosen Option : 3

Q.44 For a specific wiring in a building, the full load current is 7.5 A. what will be the permissible insulation resistance to earth for a 240 V system of supply?

- Ans
- ☐ 1. 0.20 MΩ
  - ☐ 2. 0.18 MΩ
  - ☒ 3. 0.16 MΩ
  - ☐ 4. 0.22 MΩ

Question ID : 600929895  
Status : Not Answered  
Chosen Option : --

Q.45 The SI unit of permeability is:

- Ans
- ☐ 1. Tesla
  - ☐ 2. Henry-meter
  - ☐ 3. Ampere turns
  - ☒ 4. Henry/meter

Question ID : 600929795  
Status : Answered  
Chosen Option : 4

Q.46 In case of a sinusoidal current, the unit of the amplitude is:

- Ans
- ☐ 1. Radians/second
  - ☐ 2. Hertz
  - ☐ 3. Radians
  - ☒ 4. Amperes

Question ID : 600929802  
Status : Answered  
Chosen Option : 4



Q.47 Lamp efficiency is expressed in:

- Ans
- ☐ 1. Lumens-meter
  - ☐ 2. Lumens/ meter
  - ☐ 3. Lux
  - ☒ 4. Lumens/watt

Question ID : 600929857  
Status : Answered  
Chosen Option : 4

Q.48 For a transistor connected in common base connection, collector current is 0.95 mA and base current is 0.05 mA. Find the value of  $\alpha$ :

- Ans
- ☐ 1. 1.00
  - ☐ 2. 0.5
  - ☒ 3. 0.95
  - ☐ 4. 0.05

Question ID : 600929867  
Status : Answered  
Chosen Option : 3

Q.49 In a DC motor, the mechanical output power actually comes from:

- Ans
- ☐ 1. Field system
  - ☐ 2. Back e.m.f.
  - ☐ 3. Airgap flux
  - ☒ 4. Electrical input power

Question ID : 600929820  
Status : Answered  
Chosen Option : 2

Q.50 In human body temperature control system, the command input is:

- Ans
- ☐ 1. Temperature of the surroundings
  - ☐ 2. Initial temperature of the body
  - ☒ 3. Desired skin temperature
  - ☐ 4. Actual skin temperature

Question ID : 600929880  
Status : Answered  
Chosen Option : 1

Q.51 For determination of load of an installation, if not specified, the rating assumed for power socket outlet is \_\_\_\_\_.

- Ans
- ☐ 1. 600 W
  - ☐ 2. 2000 W
  - ☐ 3. 500 W
  - ☒ 4. 1000 W

Question ID : 600929886  
Status : Answered  
Chosen Option : 2

Q.52 According to voltage, the cables for operating voltage up to 33000 V are called \_\_\_\_\_.

- Ans
- ☒ 1. Low voltage cables
  - ☒ 2. High voltage cables
  - ☒ 3. Super-tension cables
  - ☒ 4. Extra high tension cables

Question ID : 600929893

Status : Answered

Chosen Option : 2

Q.53 If the effect of earth is taken into account, then the capacitance of line to ground:

- Ans
- ☒ 1. Remains unchanged
  - ☒ 2. Decreases
  - ☒ 3. Increases
  - ☒ 4. Becomes infinite

Question ID : 600929842

Status : Not Answered

Chosen Option : --

Q.54 The SI derived unit for conductance is:

- Ans
- ☒ 1. Siemens
  - ☒ 2. Ohm-metre
  - ☒ 3. Ohm
  - ☒ 4. Volts

Question ID : 600929779

Status : Answered

Chosen Option : 1

Q.55 Determine the ratio of weights of copper in an auto transformer and a two winding transformer if the transformation ratio is 3.

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

Question ID : 600929822

Status : Answered

Chosen Option : 2

Q.56 If the collector current changes from 2 mA to 3 mA in a transistor when collector-emitter voltage is increased from 2 V to 10 V. what is the output resistance?

- Ans
- ☒ 1. 5 k $\Omega$
  - ☒ 2. 10 k $\Omega$
  - ☒ 3. 3.33 k $\Omega$
  - ☒ 4. 8 k $\Omega$

Question ID : 600929869

Status : Answered

Chosen Option : 4

Q.57 Which one of the following is not a characteristic of magnetic flux?

- Ans
- ☒ 1. Magnetic flux lines does not have physical existence.
  - ☒ 2. Each line of magnetic flux is a closed loop by itself.
  - ☒ 3. Magnetic flux lines having opposite direction repel each other.
  - ☒ 4. Magnetic flux lines having opposite direction attract each other.

Question ID : 600929796

Status : Answered

Chosen Option : 3

Q.58 Two coils having self-inductance of 5 H and 4 H respectively, are magnetically coupled. Find the coefficient of coupling if the mutual inductance between the coils is 2.5 H.

- Ans
- ☒ 1. 0.28
  - ☒ 2. 0.84
  - ☒ 3. 0.96
  - ☒ 4. 0.56

Question ID : 600929800

Status : Answered

Chosen Option : 4

Q.59 A sinusoidal current has a maximum value of 10 A. If the signal is half rectified, its rms value will be:

- Ans
- ☒ 1. 10 A
  - ☒ 2. 7.07 A
  - ☒ 3. 5 A
  - ☒ 4. 14.14 A

Question ID : 600929809

Status : Answered

Chosen Option : 3

Q.60 The impulse response of an R-L circuit is:

- Ans
- ☒ 1. Step function
  - ☒ 2. Rising exponential function
  - ☒ 3. Decaying exponential function
  - ☒ 4. Parabolic function

Question ID : 600929881

Status : Answered

Chosen Option : 1

Q.61 Reciprocity theorem cannot be applied to the circuits having \_\_\_\_.

- Ans
- ☒ 1. Linear elements
  - ☒ 2. Dependent sources
  - ☒ 3. Bilateral elements
  - ☒ 4. Passive elements

Question ID : 600929785

Status : Answered

Chosen Option : 4

Q.62 With reference to the error analysis of the control systems, the term 'acceleration error constant' stands for:

- Ans
- ☒ 1. Ramp error constant
  - ☒ 2. Step error constant
  - ☒ 3. Parabolic error constant
  - ☒ 4. Position error constant

Question ID : 600929885  
Status : Not Answered  
Chosen Option : --

Q.63 Which of the following defect is most likely to cause a single-phase induction motor to run slower than normal?

- Ans
- ☒ 1. Improper fuses
  - ☒ 2. Shorted running winding
  - ☒ 3. Open starting winding
  - ☒ 4. Worn bearings

Question ID : 600929824  
Status : Answered  
Chosen Option : 4

Q.64 Which one of the following is a common application of a crystal diode?

- Ans
- ☒ 1. A voltage regulator
  - ☒ 2. An amplifier
  - ☒ 3. A rectifier
  - ☒ 4. An Oscillator

Question ID : 600929864  
Status : Answered  
Chosen Option : 3

Q.65 The chording angle for eliminating fifth harmonic should be:

- Ans
- ☒ 1.  $35^\circ$
  - ☒ 2.  $45^\circ$
  - ☒ 3.  $30^\circ$
  - ☒ 4.  $40^\circ$

Question ID : 600929835  
Status : Answered  
Chosen Option : 1

Q.66 D-type cartridge fuses have ratings from \_\_\_\_\_.

- Ans
- ☒ 1. 15 A to 75 A
  - ☒ 2. 1 A to 100 A
  - ☒ 3. 2 A to 63 A
  - ☒ 4. 1 A to 5 A

Question ID : 600929852  
Status : Not Answered  
Chosen Option : --

Q.67 As per IE Rules, the terminal voltage must be within the \_\_\_\_\_ range, if the nominal voltage is 240 V.

- Ans
- ☒ 1. 225 V to 255 V
  - ☒ 2. 228 V to 252 V
  - ☒ 3. 220 V to 260 V
  - ☒ 4. 215 V to 265 V

Question ID : 600929850

Status : Answered

Chosen Option : 3

Q.68 A 3-phase induction motor is wound for 4 poles and is supplied from 50 Hz supply. Calculate the rotor speed if the slip is 4%.

- Ans
- ☒ 1. 1600 rpm
  - ☒ 2. 1500 rpm
  - ☒ 3. 1560 rpm
  - ☒ 4. 1440 rpm

Question ID : 600929828

Status : Answered

Chosen Option : 4

Q.69 If two coils are magnetically coupled and if the entire flux produced by one coil is linked with another coil, the coefficient of coupling  $k$  will be:

- Ans
- ☒ 1. 0.75
  - ☒ 2. 0
  - ☒ 3. 0.5
  - ☒ 4. 1

Question ID : 600929799

Status : Answered

Chosen Option : 4

Q.70 A 6-pole, 50 Hz, 3-phase induction motor has a full load speed of 950 rpm. What will be the speed at half-load?

- Ans
- ☒ 1. 1000 rpm
  - ☒ 2. 500 rpm
  - ☒ 3. 475 rpm
  - ☒ 4. 975 rpm

Question ID : 600929825

Status : Answered

Chosen Option : 4

Q.71 The power factor of a spot welding machine is expected to be around:

- Ans
- ☒ 1. unity
  - ☒ 2. 0.8 lagging
  - ☒ 3. 0.8 leading
  - ☒ 4. 0.3 to 0.5 lagging

Question ID : 600929859

Status : Not Answered

Chosen Option : --

Q.72 Which of the following statement is TRUE in case of a HVDC system?

- Ans
- ☒ 1. neither charging current nor skin effect
  - ☐ 2. charging current as well as skin effect
  - ☐ 3. charging current but no skin effect
  - ☐ 4. no charging current but skin effect

Question ID : 600929876  
Status : Answered  
Chosen Option : 1

Q.73 Demand factor is defined as:

- Ans
- ☐ 1. Ratio of connected load to maximum demand
  - ☐ 2. The sum of individual maximum demands
  - ☐ 3. Ratio of average load to maximum demand
  - ☒ 4. Ratio of maximum demand to connected load

Question ID : 600929838  
Status : Answered  
Chosen Option : 4

Q.74 In a non-magnetic material, the graph of flux density (B) versus filed strength (H) is:

- Ans
- ☐ 1. A straight horizontal line parallel to the X-axis
  - ☒ 2. A straight line passing through the origin
  - ☐ 3. An exponentially rising curve
  - ☐ 4. An exponentially falling curve

Question ID : 600929797  
Status : Answered  
Chosen Option : 2

Q.75 Weber is the unit of \_\_\_\_\_.

- Ans
- ☐ 1. Reluctance
  - ☐ 2. Magnetomotive force
  - ☐ 3. Magnetic flux density
  - ☒ 4. Magnetic flux

Question ID : 600929794  
Status : Answered  
Chosen Option : 4

Q.76 Impulse ratios of insulators and lightning arresters should be:

- Ans
- ☒ 1. High and low respectively
  - ☐ 2. Low and high respectively
  - ☐ 3. Both low
  - ☐ 4. Both high

Question ID : 600929841  
Status : Answered  
Chosen Option : 1

Q.77 A lighting discharge between clouds during a thunder storm is of 30 C. The time of the discharge is 10 msec. Determine the average lighting current:

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

Question ID : 600929781

Status : Not Answered

Chosen Option : --

Q.78 Resistance switching is normally resorted in which of the following type of circuit breaker?

- Ans
- ☒ 1. Controlled break oil circuit breakers
  - ☒ 2. Air blast circuit breakers
  - ☒ 3. Bulk oil circuit breakers
  - ☒ 4. Minimum oil circuit breakers

Question ID : 600929872

Status : Not Answered

Chosen Option : --

Q.79 Considering the principle of duality, which of the following pair is INVALID dual pair?

- Ans
- ☒ 1. Resistance and Conductance
  - ☒ 2. Impedance and Reactance
  - ☒ 3. Voltage and Current
  - ☒ 4. Inductance and Capacitance

Question ID : 600929786

Status : Answered

Chosen Option : 2

Q.80 What will be the phase difference between the two sinusoidal voltages  $V_1 = -10 \cos(\omega t + 50^\circ)$  and  $V_2 = 12 \sin(\omega t - 10^\circ)$ ?

- Ans
- ☒ 1.  $30^\circ$
  - ☒ 2.  $90^\circ$
  - ☒ 3.  $120^\circ$
  - ☒ 4.  $60^\circ$

Question ID : 600929808

Status : Answered

Chosen Option : 4

Q.81 Which of the following connection is best suited for 3-phase, 4-wire service?

- Ans
- ☒ 1. Delta-delta
  - ☒ 2. Delta-star
  - ☒ 3. Star-star
  - ☒ 4. Star-delta

Question ID : 600929821

Status : Answered

Chosen Option : 2

Q.82 Which of the following is not a valid method of neutral grounding?

- Ans
- ☒ 1. Solid grounding
  - ☒ 2. Reactance grounding
  - ☒ 3. Voltage transformer ground
  - ☒ 4. Pulse transformer grounding

Question ID : 600929874  
Status : Answered  
Chosen Option : 4

Q.83 A loop which does not contain any other loop within it is called \_\_\_\_\_.

- Ans
- ☒ 1. Mesh
  - ☒ 2. Super node
  - ☒ 3. Node
  - ☒ 4. Port

Question ID : 600929784  
Status : Answered  
Chosen Option : 1

Q.84 Four  $100\ \Omega$  resistors are connected in parallel. The equivalent resistance of the parallel connection is:

- Ans
- ☒ 1.  $400\ \Omega$
  - ☒ 2.  $25\ \Omega$
  - ☒ 3.  $100\ \Omega$
  - ☒ 4.  $50\ \Omega$

Question ID : 600929789  
Status : Answered  
Chosen Option : 2

Q.85 The color of sodium vapor discharge lamp is:

- Ans
- ☒ 1. Yellow
  - ☒ 2. Red
  - ☒ 3. Green
  - ☒ 4. Pink

Question ID : 600929858  
Status : Answered  
Chosen Option : 4

Q.86 The only promising solution of feeding the field winding of large turbogenerators (above 500 MW) is:

- Ans
- ☒ 1. Static excitation system
  - ☒ 2. Brushless excitation system
  - ☒ 3. Only thyristor bridge
  - ☒ 4. DC exciters

Question ID : 600929830  
Status : Answered  
Chosen Option : 4



Q.87 A fractional pitch winding cannot be used to reduce:

- Ans
- ☒ 1. Size of the machine
  - ☐ 2. Harmonics in the generated e.m.f.
  - ☐ 3. Amount of copper in the winding
  - ☐ 4. Cost of the machine

Question ID : 600929837  
Status : Not Answered  
Chosen Option : --

Q.88 If  $\delta$  is the loss angle of the cable, its power factor is:

- Ans
- ☐ 1.  $\tan \delta$
  - ☒ 2.  $\sin \delta$
  - ☐ 3. Independent of  $\delta$
  - ☐ 4.  $\cos \delta$

Question ID : 600929844  
Status : Answered  
Chosen Option : 1

Q.89 The primary standard for calibrating vacuum is:

- Ans
- ☒ 1. McLeod gauge
  - ☐ 2. Dead weight tester
  - ☐ 3. Thermocouple gauge
  - ☐ 4. Knudsen gauge

Question ID : 600929816  
Status : Not Answered  
Chosen Option : --

Q.90 The net charge on a neutral atom of an element will be \_\_\_\_\_.

- Ans
- ☐ 1. Positive
  - ☐ 2. Negative
  - ☐ 3. Infinite
  - ☒ 4. Zero

Question ID : 600929776  
Status : Answered  
Chosen Option : 4

Q.91 Which of the following is a characteristic of a reverse biased p-n junction?

- Ans
- ☐ 1. Very narrow depletion region
  - ☐ 2. Large current flow
  - ☒ 3. Almost no current
  - ☐ 4. Very low resistance

Question ID : 600929863  
Status : Answered  
Chosen Option : 3

Q.92 A generator develops 200 V and has an internal resistance of  $100\ \Omega$ . Find the power delivered to the load resistance of  $300\ \Omega$ .

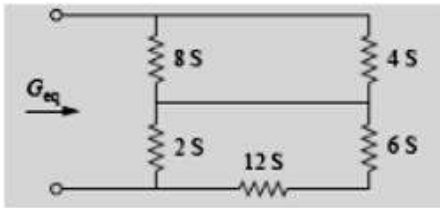
- Ans
- ☒ 1. 75 W
  - ☐ 2. 25 W
  - ☐ 3. 100 W
  - ☐ 4. 50 W

Question ID : 600929783

Status : Answered

Chosen Option : 3

Q.93 Calculate  $G_{eq}$  in the following circuit:



- Ans
- ☐ 1. 8 S
  - ☒ 2. 4 S
  - ☐ 3. 6 S
  - ☐ 4. 10 S

Question ID : 600929791

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.94 Steel rails are welded by:

- Ans
- ☐ 1. Argon arc welding
  - ☐ 2. Gas welding
  - ☐ 3. Resistance welding
  - ☒ 4. Thermit welding

Question ID : 600929860

Status : Answered

Chosen Option : 3

Q.95 A sinusoid is expressed as  $5 \sin(4\pi t - 60^\circ)$ . Find the frequency.

- Ans
- ☒ 1. 2 Hz
  - ☐ 2. 50 Hz
  - ☐ 3. 60 Hz
  - ☐ 4. 20 Hz

Question ID : 600929805

Status : Answered

Chosen Option : 1

Q.96 Which of the following property is not desirable for the insulating material used in electrical cables?

- Ans
- ☒ 1. Non-inflammability
  - ☒ 2. Low resistivity
  - ☒ 3. High flexibility
  - ☒ 4. High dielectric strength

Question ID : 600929887  
Status : Answered  
Chosen Option : 2

Q.97 Which type of earthing is most common and best system of earthing?

- Ans
- ☒ 1. Rod earthing
  - ☒ 2. Plate earthing
  - ☒ 3. Wire earthing
  - ☒ 4. Pipe earthing

Question ID : 600929889  
Status : Answered  
Chosen Option : 4

Q.98 In a signal flow graph representation, a loop consisting of a single branch and a single node is known as:

- Ans
- ☒ 1. Non-touching loop
  - ☒ 2. Self-loop
  - ☒ 3. Touching loop
  - ☒ 4. Mixed loop

Question ID : 600929883  
Status : Not Answered  
Chosen Option : --

Q.99 What will be the period of the sinusoid,  $v(t) = 12 \cos(50t + 30^\circ)$  ?

- Ans
- ☒ 1. 0.1257 s
  - ☒ 2. 1.257 s
  - ☒ 3. 12.57 s
  - ☒ 4. 50 s

Question ID : 600929806  
Status : Answered  
Chosen Option : 1

Q.100 Two materials A and B have resistance temperature coefficients 0.004 and 0.0004 per  $^\circ\text{C}$  respectively at a given temperature. In what proportion should A and B be joined in series to produce a circuit having a temperature coefficient of 0.001.

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

Question ID : 600929793  
Status : Answered  
Chosen Option : 1

Q.101 A string insulator has 4 units. The voltage across the bottom-most unit is 33.33% of the total voltage. Find the string efficiency.

- Ans
- ☐ 1. 25%
  - ☐ 2. 33.33%
  - ☐ 3. 66.67%
  - ☒ 4. 75%

Question ID : 600929847  
Status : Answered  
Chosen Option : 4

Q.102 The radius of a sphere is given as  $40.0 \pm 0.5$  mm. The estimated error in its mass is:

- Ans
- ☐ 1.  $\pm 0.125\%$
  - ☐ 2.  $\pm 1.25\%$
  - ☒ 3.  $\pm 3.75\%$
  - ☐ 4.  $\pm 12.5\%$

Question ID : 600929817  
Status : Not Answered  
Chosen Option : --

Q.103 A DC voltage source has a source resistance variable from  $5\ \Omega$  to  $25\ \Omega$  and it is connected to a load of  $10\ \Omega$ . For maximum power transfer, the source resistance should be:

- Ans
- ☐ 1.  $5\ \Omega$
  - ☒ 2.  $10\ \Omega$
  - ☐ 3.  $15\ \Omega$
  - ☐ 4.  $25\ \Omega$

Question ID : 600929788  
Status : Answered  
Chosen Option : 2

Q.104 The largest possible value of solid angle is \_\_\_\_\_.

- Ans
- ☐ 1.  $\pi$
  - ☐ 2.  $2\pi$
  - ☐ 3.  $3\pi$
  - ☒ 4.  $4\pi$

Question ID : 600929856  
Status : Answered  
Chosen Option : 2

Q.105 A resistance measurement reading is  $68.0\ \Omega$ . The number of significant figures in the reading is:

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

Question ID : 600929814  
Status : Answered  
Chosen Option : 2

**Q.106** A stepper motor has a step angle of  $2.5^\circ$ . Calculate the number of steps required for the shaft to make 25 revolutions.

- Ans
- ☒ 1. 1800
  - ☒ 2. 3600
  - ☒ 3. 2700
  - ☒ 4. 900

Question ID : 600929827

Status : Answered

Chosen Option : 2

**Q.107** In a star connected resistive network, each resistor has a value of  $100\ \Omega$ . If the star to delta conversion is performed, each resistor in delta network will be:

- Ans
- ☒ 1.  $200\ \Omega$
  - ☒ 2.  $150\ \Omega$
  - ☒ 3.  $250\ \Omega$
  - ☒ 4.  $300\ \Omega$

Question ID : 600929792

Status : Answered

Chosen Option : 4

**Q.108** The e.m.f. generated in an alternator is independent of:

- Ans
- ☒ 1. Speed
  - ☒ 2. Type of alternator
  - ☒ 3. Series turns per phase
  - ☒ 4. Coil span

Question ID : 600929833

Status : Answered

Chosen Option : 2

**Q.109** For a sinusoidal wave, the value of the Crest factor is:

- Ans
- ☒ 1. 2.82
  - ☒ 2. 1.414
  - ☒ 3. 0.707
  - ☒ 4. 1.11

Question ID : 600929810

Status : Answered

Chosen Option : 2

**Q.110** Which of the following is a disadvantage of synchronous motor over induction motor for power requirements from 35 kW up to about 2500 kW?

- Ans
- ☒ 1. Cost
  - ☒ 2. Size
  - ☒ 3. Weight
  - ☒ 4. Requirement of DC supply for field

Question ID : 600929832

Status : Answered

Chosen Option : 4

Q.111 Which of the following is not a part of Brushless Excitation scheme used for synchronous machines?

- Ans
- ☒ 1. Pilot exciter
  - ☒ 2. Main exciter
  - ☒ 3. Brushes
  - ☒ 4. 3-phase alternator

Question ID : 600929829

Status : Answered

Chosen Option : 2

Q.112 A 50 Hz overhead line has line to earth capacitance of  $1 \mu\text{F}$ . It is decided to use an earth fault neutralizer. Determine the reactance to neutralize the capacitance of entire length of the line.

- Ans
- ☒ 1.  $1061 \Omega$
  - ☒ 2.  $2000 \Omega$
  - ☒ 3.  $1261 \Omega$
  - ☒ 4.  $1000 \Omega$

Question ID : 600929875

Status : Not Answered

Chosen Option : --

Q.113 For a transistor  $\beta = 45$  and voltage drop across  $1 \text{ k}\Omega$  resistor, which is connected in the collector circuit is 1 volt. Find base current for CE configuration.

- Ans
- ☒ 1.  $22 \text{ mA}$
  - ☒ 2.  $0.022 \text{ mA}$
  - ☒ 3.  $0.22 \text{ mA}$
  - ☒ 4.  $2.2 \text{ mA}$

Question ID : 600929868

Status : Not Answered

Chosen Option : --

Q.114 Phase modifier is normally installed in \_\_\_\_\_.

- Ans
- ☒ 1. Short transmission lines
  - ☒ 2. Medium transmission lines
  - ☒ 3. Long transmission lines
  - ☒ 4. All transmission lines

Question ID : 600929846

Status : Not Answered

Chosen Option : --

Q.115 To construct the dual of a four-mesh network how many nodes are required?

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

Question ID : 600929787

Status : Not Answered

Chosen Option : --

Q.116 In SI system, the base unit for the measurement of Luminous intensity is:

- Ans
- ☒ 1. Lumen
  - ☒ 2. Candela
  - ☒ 3. Tesla
  - ☒ 4. Kelvin

Question ID : 600929813  
Status : Answered  
Chosen Option : 2

Q.117 Which of the following alternatives will be cheaper?

- Ans
- ☒ 1. Ten motors of 10 HP each
  - ☒ 2. Five motors of 20 HP each
  - ☒ 3. A 100 HP A.C. three phase motor
  - ☒ 4. Four motors of 25 HP each

Question ID : 600929862  
Status : Answered  
Chosen Option : 3

Q.118 Which test is used to determine the efficiency of a traction motor?

- Ans
- ☒ 1. Field's test
  - ☒ 2. Hopkinson's test
  - ☒ 3. Retardation test
  - ☒ 4. Swinburne's test

Question ID : 600929823  
Status : Answered  
Chosen Option : 1

Q.119 As per IS 3043-1966, pipe type earth electrode made up of steel should not be smaller than \_\_\_\_\_ internal diameter.

- Ans
- ☒ 1. 24 mm
  - ☒ 2. 30 mm
  - ☒ 3. 16 mm
  - ☒ 4. 38 mm

Question ID : 600929853  
Status : Answered  
Chosen Option : 2

Q.120 The minimum size of aluminium cable generally used for light and fan sub-circuits is 1/1.40 mm having current capacity of \_\_\_\_\_.

- Ans
- ☒ 1. 20 A
  - ☒ 2. 25 A
  - ☒ 3. 10 A
  - ☒ 4. 15 A

Question ID : 600929854  
Status : Answered  
Chosen Option : 4