PGCIL

Previous Year Paper

Diploma Trainee EE 2020

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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

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**

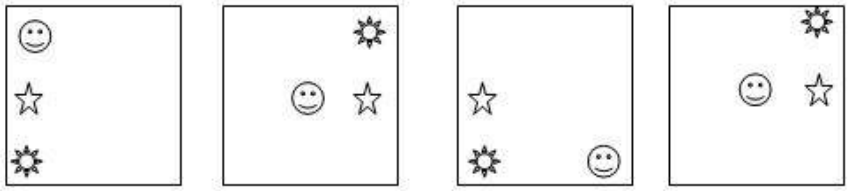
Q.2 **According to the first pattern of numbers find the value of D in second similar pattern.**

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

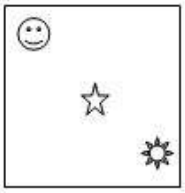
Ans
- ✗ 1. 19
- ✗ 2. 21
- ✓ 3. 23
- ✗ 4. 15

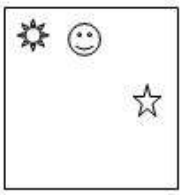
Question ID : **600929754**
Status : **Answered**
Chosen Option : **3**

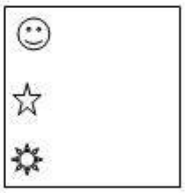
Q.3 What will be next figure in the series:

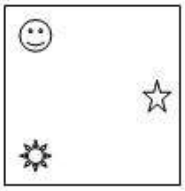


Ans

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

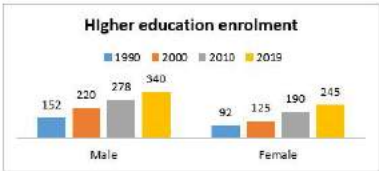
From the above premises, which one of the following conclusions is true.

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

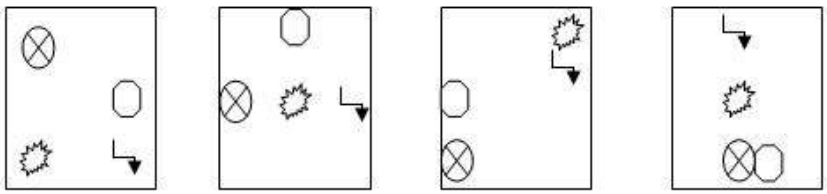
✗ 2. 2000

✓ 3. 2010

✗ 4. 2019

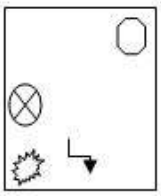
Question ID : **600929741**
Status : **Not Answered**
Chosen Option : **--**

Q.6 What will be next in the Series:

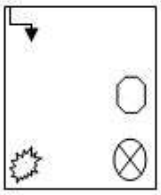


Ans

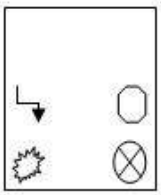
✗ 1.



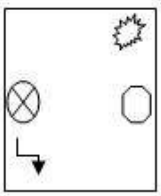
✓ 2.



✗ 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. O4P15
3. O9P14
4. O6P16

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

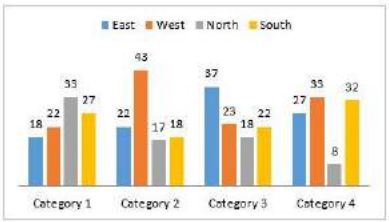
Question ID : **600929752**
Status : **Answered**
Chosen Option : **4**

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

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 (ωt + 30°) and I = 10 sin (ωt – 30°). 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 + kp)

✔ 2. Zero

✘ 3. 1/ Kp

✘ 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 μs and fall time 50 μs
4. 400 MV with rise time 1 μs and fall time 50 μs

Question ID : **600929873**
Status : **Not Answered**
Chosen Option : **--**

Q.9 If $v(t) = 12\cos(50t + 10°)$ 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. $1/5 \times$ full-pitch
✘ 2. $2/5 \times$ full-pitch
✘ 3. $3/5 \times$ full-pitch
✘ 4. $5 \times$ 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 Ω resistance is connected across a resistance of 5 Ω. The current in 5 Ω 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 Ω 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. $0.20\ M\Omega$

✘ 2. $0.18\ M\Omega$

✔ 3. $0.16\ M\Omega$

✘ 4. $0.22\ M\Omega$

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 α:

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°
2. 45°
3. 30°
4. 40°

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 $V_1 = -10\cos(\omega t + 50°)$ and $V_2 = 12\sin(\omega t - 10°)$?

Ans

✓ 1. $30°$

✗ 2. $90°$

✗ 3. $120°$

✗ 4. $60°$

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 Ω resistors are connected in parallel. The equivalent resistance of the parallel connection is:

Ans

✗ 1. 400 Ω

✓ 2. 25 Ω

✗ 3. 100 Ω

✗ 4. 50 Ω

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 δ is the loss angle of the cable, its power factor is:

Ans

✘ 1. tan δ

✔ 2. sin δ

✘ 3. Independent of δ

✘ 4. cos δ

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

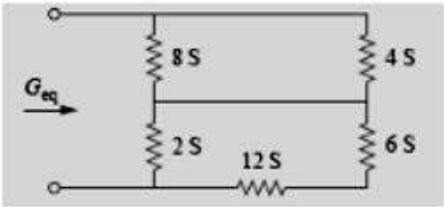
Question ID : **600929863**
Status : **Answered**
Chosen Option : **3**

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

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 $5 \sin(4\pi t - 60°)$. 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, $v(t) = 12\cos(50t + 30°)$?

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 °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 ± 0.5 mm. The estimated error in its mass is:**

Ans

✗ 1. ± 0.125%

✗ 2. ± 1.25 %

✓ 3. ± 3.75%

✗ 4. ± 12.5%

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

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

Ans

✗ 1. 5 Ω

✓ 2. 10 Ω

✗ 3. 15 Ω

✗ 4. 25 Ω

Question ID : **600929788**
Status : **Answered**
Chosen Option : **2**

Q.104 **The largest possible value of solid angle is _____.**

Ans

✗ 1. π

✗ 2. 2 π

✗ 3. 3 π

✓ 4. 4 π

Question ID : **600929856**
Status : **Answered**
Chosen Option : **2**

Q.105 A resistance measurement reading is 68.0 Ω. 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°. 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 Ω. If the star to delta conversion is performed, each resistor in delta network will be:

Ans

✗ 1. 200 Ω

✗ 2. 150 Ω

✗ 3. 250 Ω

✓ 4. 300 Ω

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 μF. 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 Ω

✗ 2. 2000 Ω

✗ 3. 1261 Ω

✗ 4. 1000 Ω

Question ID : **600929875**
Status : **Not Answered**
Chosen Option : **--**

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

Ans

✗ 1. 22 mA

✓ 2. 0.022 mA

✗ 3. 0.22 mA

✗ 4. 2.2 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**