एचपीसीएल राजस्थान रिफाइनरी लिमिटेड
(एचपीसीएल एवं राजस्थान सरकार का संयुक्त उद्यम)

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Participant Name	
Test Center Name	
Test Date	07/08/2021
Test Time	2:00 PM - 4:30 PM
Subject	Electrical (E1 & E2)

Section : **English Language**

Q.1 Given below are four jumbled parts of a sentence. Select the option that gives their correct order.

A) takes some extra
B) eating a meal
C) planning and preparation
D) in a spacecraft

Ans ✔ 1. BDAC

✘ 2. BCDA

✘ 3. CDBA

✘ 4. CDAB

Question ID : **5038909043**
Status : **Answered**
Chosen Option : **1**

Q.2 Select the option that is the active form of the given sentence.
A very important project is being finalised by us.

Ans ✘ 1. We have been finalising a very important project.

✔ 2. We are finalising a very important project.

✘ 3. We were finalising a very important project.

✘ 4. We have finalised a very important project.

Question ID : **5038909038**
Status : **Answered**
Chosen Option : **2**

Q.3 Select the most appropriate option for the blank/s.
_____ I listened, it occurred to me _____ these women are a courageous lot.

Ans

✓ 1. As, that

✗ 2. If, as

✗ 3. Though, if

✗ 4. Whether, that

Question ID : **5038909036**
Status : **Answered**
Chosen Option : **2**

Q.4 Select the option that is the indirect form of the given sentence.
The girl said to her mother, "Can I play for some more time?"

Ans

✗ 1. The girl asked her mother whether she can play for some more time.

✗ 2. The girl asked her mother that she could play for some more time.

✓ 3. The girl asked her mother whether she could play for some more time.

✗ 4. The girl told her mother whether she could play for some more time.

Question ID : **5038909039**
Status : **Answered**
Chosen Option : **3**

Q.5 Select the option that is the most appropriate synonym of the given word.
remnant

Ans

✗ 1. complete

✗ 2. whole

✗ 3. total

✓ 4. residue

Question ID : **5038909029**
Status : **Answered**
Chosen Option : **4**

Q.6 Select the most appropriate meaning of the underlined idiom.

Why are you always in a hurry? Remember haste makes waste.

Ans

✗ 1. creating a lot of wastage

✓ 2. mistakes can occur if one takes hasty decisions

✗ 3. taking quick actions is useful

✗ 4. overworking can be dangerous

Question ID : **5038909032**
Status : **Answered**
Chosen Option : **2**

Q.7 Select the most appropriate option for the blank/s.
It _____ late afternoon and three days of rain _____ not stopped.

Ans   ✗ 1. has been, is

✓ 2. was, had

✗ 3. is, will

✗ 4. Will be, does

Question ID : **5038909037**

Status : **Answered**

Chosen Option : **2**

Q.8 Select the most appropriate one-word substitute for the following group of words:
Government orders that limit trade in some way

Ans   ✗ 1. help

✗ 2. entourage

✗ 3. aid

✓ 4. embargo

Question ID : **5038909033**

Status : **Answered**

Chosen Option : **4**

Q.9 Select the most appropriate meaning of the underlined idiom.

Both the quizzing teams are experienced teams so it is a level playing field.

Ans   ✗ 1. open air quiz

✓ 2. fair competition

✗ 3. unequal competition

✗ 4. having no competition

Question ID : **5038909031**

Status : **Answered**

Chosen Option : **2**

Q.10 A sentence has been divided in segments. Select the segment that has grammatical error(s).
Together /we can/ and we will/ saved our planet.

Ans   ✓ 1. saved our planet.

✗ 2. and we will

✗ 3. Together

✗ 4. we can

Question ID : **5038909041**

Status : **Answered**

Chosen Option : **3**

Q.11 Select the most appropriate option for the blank/s.
Karuna told me _____ her family, her friends and her affection ____ her three dogs.

Ans

✗ 1. for, for

✔ 2. about, for

✗ 3. on, for

✗ 4. around, in

Question ID : **5038909034**
Status : **Answered**
Chosen Option : **2**

Q.12 Given below are four jumbled parts of a sentence. Select the option that gives their correct order.

A) a young arctic fox,
B) in just 76 days
C) from Norway to Canada
D) trekked more than 2,175 miles

Ans

✗ 1. BCDA

✔ 2. ADCB

✗ 3. CBAD

✗ 4. CDBA

Question ID : **5038909042**
Status : **Answered**
Chosen Option : **2**

Q.13 Select the option that is the direct form of the given sentence
The teacher asked the boy why he was so lazy.

Ans

✗ 1. The teacher said to the boy, "Why have you been so lazy?"

✔ 2. The teacher said to the boy, "Why are you so lazy?"

✗ 3. The teacher said to the boy, "Why were you so lazy?"

✗ 4. The teacher said to the boy, "Why you so lazy?"

Question ID : **5038909040**
Status : **Answered**
Chosen Option : **2**

Q.14 Given below are four jumbled sentences. Select the option that gives their correct order forming a meaningful and coherent paragraph.

A) later in the evening, she told the journalists and onlookers gathered, "It was the best way to celebrate."
B) Maathai planted the tree in Kenya, which is her homeland and which is where she was when she heard the news
C) within an hour of learning she had won the peace prize, Wangari Maathai planted a Nandi flame tree
D) she knelt on the earth and dug her hands into the red soil, warm from the sun, and settled the tree into the ground

Ans ✗ 1. BDAC

✔ 2. CBDA

✗ 3. DCBA

✗ 4. CDAB

Question ID : **5038909044**
Status : **Answered**
Chosen Option : **3**

Q.15 Select the incorrectly spelt word.

Ans ✔ 1. acommodation

✗ 2. accurately

✗ 3. acceleration

✗ 4. appreciative

Question ID : **5038909045**
Status : **Answered**
Chosen Option : **1**

Q.16 Select the most appropriate option for the blank/s.
I would like ____ to do _____ work _____, so that _____ gain more confidence.

Ans ✔ 1. you, your, yourself, you

✗ 2. you, your, oneself, you

✗ 3. her, her, yourself, she

✗ 4. you, my, myself, I

Question ID : **5038909035**
Status : **Answered**
Chosen Option : **2**

Q.17 Select the option that is the most appropriate antonym of the given word.
spurious

Ans ✗ 1. bogus

✔ 2. genuine

✗ 3. fake

✗ 4. deceptive

Question ID : **5038909030**
Status : **Answered**
Chosen Option : **4**

Section : **Quantitative Aptitude**

Q.1 360 छात्रों वाले एक विद्यालय में 45 प्रतिशत लड़के हैं। विद्यालय में कितने और अधिक लड़कों को दाखिला दिया जाए कि लड़के 50 प्रतिशत हो जाएं?

Ans ✔ 1. 36

✗ 2. 20

✗ 3. 18

✗ 4. 24

Question ID : **5038909059**

Status : **Answered**

Chosen Option : **3**

Q.2 पांच सबसे छोटी वर्ग संख्याओं और पांच सबसे छोटी अभाज्य संख्याओं का औसत ज्ञात कीजिए।

Ans ✗ 1. 9.4

✗ 2. 11.8

✗ 3. 7.3

✔ 4. 8.3

Question ID : **5038909069**

Status : **Answered**

Chosen Option : **2**

Q.3 $2^y = 8^{2x+1}$ and $3^{2(x-5)} = 9^{2y}$ then find the value of $x + y$.

Ans ✗ 1. 2

✗ 2. 4

✔ 3. -4

✗ 4. -2

Question ID : **5038909048**

Status : **Answered**

Chosen Option : **3**

Q.4 A can cover a certain distance at a speed of 42 km/h in 1 hour 20 minutes. If A increases his speed by 6 km/h, then how much time will he take to cover the same distance?

Ans ✗ 1. 1 h 15 m

✔ 2. 1 h 10 m

✗ 3. 1 h 12 m

✗ 4. 1 h 20 m

Question ID : **5038909061**

Status : **Answered**

Chosen Option : **2**

Q.5 Simplify the following expression.

$$\frac{0.0036 + 36.36}{1.15 + 0.05 + 0.1}$$

Ans
✗ 1. 2.7972

✗ 2. 297.72

✔ 3. 27.972

✗ 4. 27927

Question ID : **5038909053**
Status : **Answered**
Chosen Option : **3**

Q.6 The sum of two numbers is 28. When 6 is added to both the numbers, the product of the numbers will be 396. Find the sum of the squares of the two given numbers.

Ans
✗ 1. 300

✗ 2. 420

✗ 3. 380

✔ 4. 400

Question ID : **5038909077**
Status : **Answered**
Chosen Option : **4**

Q.7 यदि किसी संख्या का 48 प्रतिशत एक दूसरी संख्या में से घटाया जाए, तो दूसरी संख्या घटकर इसके 60 प्रतिशत के बराबर हो जाती है। पहली संख्या और दूसरी संख्या का अनुपात ज्ञात कीजिए।

Ans
✗ 1. 0.170138888888889

✗ 2. 0.253472222222222

✔ 3. 0.2125

✗ 4. 1.14236111111111

Question ID : **5038909056**
Status : **Answered**
Chosen Option : **4**

Q.8 A capsule of medicine is in the shape of a cylinder with hemispheres attached at both the ends. If diameter of the hemisphere is 0.42 cm and length of the capsule is 1.5 cm, then find the capacity of 100 such capsules (in cubic cm correct to 2 decimal places).

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

Ans
✗ 1. 1884.96

✗ 2. 188.49

✔ 3. 18.85

✗ 4. 1885

Question ID : **5038909074**
Status : **Answered**
Chosen Option : **2**

Q.9 एक वर्ग के विकर्णों की लंबाइयों का योग 120 cm है। उस आयत का परिमाप (cm में) ज्ञात कीजिए जिसका क्षेत्रफल वर्ग के क्षेत्रफल के बराबर है और एक भुजा की लंबाई 40 cm है।

Ans
✗ 1. 85
✗ 2. 360
✔ 3. 170
✗ 4. 260

Question ID : 5038909073
Status : Answered
Chosen Option : 2

Q.10 A sports T-shirt costs Rs. 72 per piece and a sports cap costs Rs. 35 per piece. What is the cost of 50 T-shirts and 25 caps (in Rs.)?

Ans
✗ 1. 3550
✗ 2. 8025
✗ 3. 4500
✔ 4. 4475

Question ID : 5038909058
Status : Answered
Chosen Option : 4

Q.11 5 men and 5 women working together can complete a task in 12 days. 10 men and 15 women working together can complete the same task in 5 days. In how many days will 4 men and 10 women complete the same task?

Ans
✗ 1. 9
✗ 2. $9\frac{1}{2}$
✔ 3. $9\frac{3}{8}$
✗ 4. $8\frac{3}{4}$

Question ID : 5038909065
Status : Answered
Chosen Option : 2

Q.12 एक निश्चित राशि पर 5 प्रतिशत की वार्षिक दर से चक्रवृद्धि ब्याज और साधारण ब्याज का अंतर 250 रुपये है। राशि (रुपये में) ज्ञात कीजिए।

Ans
✗ 1. 85000
✗ 2. 80000
✗ 3. 92000
✔ 4. 100000

Question ID : 5038909072
Status : Answered
Chosen Option : 4

Q.13 The sum of and difference between the LCM and HCF of two numbers is 264 and 216 respectively. If the two numbers differ by 72, then find the sum of 5 times the smaller number and 2 times the greater number.

Ans ✔ 1. 480

✘ 2. 450

✘ 3. 360

✘ 4. 696

Question ID : **5038909050**

Status : **Answered**

Chosen Option : **4**

Q.14 If the difference of the squares of two consecutive natural numbers is 51, then what is the sum of the squares of these natural numbers?

Ans ✘ 1. 1201

✔ 2. 1301

✘ 3. 1250

✘ 4. 1200

Question ID : **5038909076**

Status : **Answered**

Chosen Option : **2**

Q.15 The average age of a group of 5 members 2 years ago was 42 years. A new member has joined the group and the current average age of the group has become 45 years. What is the current age of the new member (in years)?

Ans ✘ 1. 58

✘ 2. 55

✘ 3. 60

✔ 4. 50

Question ID : **5038909070**

Status : **Answered**

Chosen Option : **1**

Q.16 निम्न तालिका कुछ परिवारों की मासिक को आय दर्शाती है।

35000 रुपये तक मासिक आय वाले परिवारों का प्रतिशत क्या है?

संदर्भ- up to (रुपये तक)

families (परिवार)

Upto Rs	30000	35000	40000	45000	50000	55000	60000
Families	8	18	30	44	56	68	75

Ans ✗ 1. 18

✗ 2. 20

✗ 3. 10.6

✔ 4. 24

Question ID : 5038909078
Status : **Answered**
Chosen Option : 3

Q.17 Balbir Singh can row 33 km upstream in 3 hours and 30 km downstream in 2 hours. What is the speed of the boat in still water (in km/h)?

Ans ✗ 1. 11

✔ 2. 13

✗ 3. 15

✗ 4. 12

Question ID : 5038909062
Status : **Answered**
Chosen Option : 2

Q.18 एक निश्चित समय में दो पुरुष 3 लड़कों के बराबर कार्य कर सकते हैं। यदि 6 पुरुष एक निश्चित कार्य को 18 दिनों में पूरा कर सकते हैं, तो 7 पुरुष और 3 लड़के उसी कार्य को कितने दिनों में पूरा करेंगे?

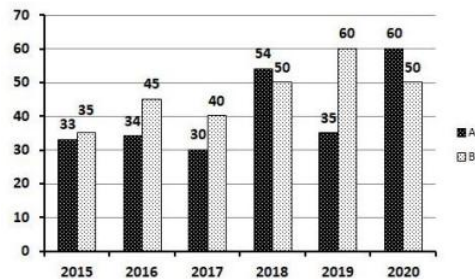Ans ✔ 1. 12

✗ 2. $13\frac{1}{2}$

✗ 3. 11

✗ 4. $10\frac{4}{5}$

Question ID : 5038909063
Status : **Answered**
Chosen Option : 2

Q.19 In the following graph, exports by two companies A and B over six years (in crore Rs.) have been shown.

By how much is the average exports by Company B from 2015 to 2019 more than the average exports by Company A over the entire six years (in crore Rs.)?

Ans
✗ 1. 4.2

✗ 2. 4.8

✗ 3. 4.5

✔ 4. 5

Question ID : **5038909079**
Status : **Answered**
Chosen Option : **1**

Q.20 The cost price of 10 chairs is Rs. 8000. Manohar spends Rs. 500 as cartage charges. What should be the selling price of each chair (in Rs.) so that Manohar gains 10 percent?

Ans
✗ 1. 880

✗ 2. 950

✔ 3. 935

✗ 4. 930

Question ID : **5038909066**
Status : **Answered**
Chosen Option : **3**

Q.21 In a test, a student got 32 percent marks and failed by 36 marks. In the same test, another student got 42 percent marks and obtained 84 marks more than the minimum essential passing marks. Find the maximum marks for the test.

Ans
✔ 1. 1200

✗ 2. 1000

✗ 3. 1250

✗ 4. 1150

Question ID : **5038909060**
Status : **Answered**
Chosen Option : **1**

Q.22 A shopkeeper bought 10 cardigans at Rs. 600 per piece, 8 trousers at Rs. 750 per piece and 20 shirts at Rs. 400 per piece. If he sells cardigans with 10 percent profit and trousers with 15 percent profit, then with what percent profit should he sell the shirts in order to earn 12 percent profit on the whole?

Ans
✗ 1. 11

✗ 2. 11.12

✔ 3. 11.25

✗ 4. 11.5

Question ID : **5038909068**
Status : **Answered**
Chosen Option : **2**

Q.23 तीन व्यक्तियों A, B और C ने 4:2:5 के अनुपात में निवेश के साथ एक व्यवसाय शुरू किया। उनके निवेश की अवधि का अनुपात 5:6:8 है। वर्ष के अंत में, C ने लाभ के रूप में A और B के लाभ के हिस्सों के योग से 5000 रुपये अधिक प्राप्त किए। कुल लाभ (रुपये में) ज्ञात कीजिए।

Ans
✗ 1. 42500

✗ 2. 48000

✗ 3. 40000

✔ 4. 45000

Question ID : **5038909057**
Status : **Answered**
Chosen Option : **2**

Q.24 Simplify the following expression.

$$\frac{6+6\times6}{5\times5+5}\times\frac{\dfrac{1}{6}\div\dfrac{1}{6}\ \text{of}\ \dfrac{1}{6}}{\dfrac{1}{5}\ \text{of}\ \dfrac{1}{5}\div\dfrac{1}{5}}$$

Ans
✗ 1. $\dfrac{42}{25}$

✔ 2. 42

✗ 3. $\dfrac{7}{6}$

✗ 4. 72

Question ID : **5038909051**
Status : **Answered**
Chosen Option : **3**

Q.25 A wholesaler has 240 shirts in his stock. The number of shirts of four varieties A, B, C and D are such that A:B = 7:6, B:C = 1:2 and C:D = 4:5. How many shirts of variety C are there in his stock?

Ans ✔ 1. 72

✘ 2. 90

✘ 3. 42

✘ 4. 36

Question ID : **5038909055**

Status : **Answered**

Chosen Option : **1**

Q.26 What is the reciprocal of the sum of the reciprocals of the numbers 1, 2, 5, 6, 9, 15?

Ans ✘ 1. $\dfrac{45}{47}$

✔ 2. $\dfrac{45}{92}$

✘ 3. $\dfrac{1}{38}$

✘ 4. $\dfrac{92}{45}$

Question ID : **5038909054**

Status : **Answered**

Chosen Option : **4**

Q.27 What is the largest value of k for which the number 8139108k is divisible by 6?

Ans ✘ 1. 4

✔ 2. 6

✘ 3. 8

✘ 4. 9

Question ID : **5038909047**

Status : **Answered**

Chosen Option : **2**

Q.28 The sum of LCM and HCF of two numbers is 374. If the LCM of two numbers is 21 times their HCF and one of the numbers is 119, then what is the other number?

Ans ✘ 1. 17

✘ 2. 357

✔ 3. 51

✘ 4. 48

Question ID : **5038909049**

Status : **Answered**

Chosen Option : **1**

Q.29 100 से छोटी सभी उन सभी अभाज्य संख्याओं का योग ज्ञात कीजिए जिनके इकाई स्थान पर 9 आता है।

Ans
✖ 1. 186

✖ 2. 216

✔ 3. 275

✖ 4. 324

Question ID : **5038909046**
Status : **Answered**
Chosen Option : **3**

Q.30 Five men can finish two-third of a task in 8 days. In order to complete the task in 5 days, how many men should be employed?

Ans
✖ 1. 10

✖ 2. 11

✔ 3. 12

✖ 4. 8

Question ID : **5038909064**
Status : **Answered**
Chosen Option : **3**

Q.31 Simplify the following expression.

$$\left[\left(3\sqrt{\left(\frac{2}{3}\right)^3 + \left(\frac{3}{2}\right)^3}\right)^{\sqrt{99}-\sqrt{96}}\right]^{\sqrt{99}+\sqrt{96}}$$

Ans
✖ 1. $\dfrac{2197}{216}$

✔ 2. $\dfrac{793}{216}$

✖ 3. $\dfrac{97}{36}$

✖ 4. $\dfrac{13}{6}$

Question ID : **5038909052**
Status : **Answered**
Chosen Option : **2**

Q.32 The diameters of the top and bottom of a metallic bucket are 28 cm and 14 cm respectively. The height of the bucket is 24 cm. Find the cost of the metal sheet required to make the bucket, if it is available at 25 paise per sq. cm.

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

Ans ✔ 1. Rs. 451

✘ 2. Rs. 440

✘ 3. Rs. 458

✘ 4. Rs. 420

Question ID : **5038909075**

Status : **Answered**

Chosen Option : **2**

Q.33 A and B borrowed Rs. 50000 and Rs. 46000 respectively for a period of 3 years at 10 percent per annum. A paid simple interest and B paid compound interest compounded annually. Who paid more interest and by how much?

Ans ✘ 1. B, Rs. 600

✘ 2. A, Rs. 1200

✔ 3. B, Rs. 226

✘ 4. A, Rs. 1000

Question ID : **5038909071**

Status : **Answered**

Chosen Option : **2**

Q.34 A shopkeeper sells two items. The selling price of the first item equals the cost price of the second item. He sold the first item at a loss of 10 percent and the second item at a profit of 10 percent. What is his overall profit/ loss percentage?

Ans ✘ 1. Profit, $\frac{19}{10}$ %

✔ 2. Loss $\frac{10}{19}$ %

✘ 3. Loss $\frac{19}{10}$ %

✘ 4. Profit, $\frac{10}{19}$ %

Question ID : **5038909067**

Status : **Answered**

Chosen Option : **2**

Section : **Intellectual Potential Test**

Q.1 If APRIL= 56R and MAY=39A, then which among the following will be equal to MARCH?

Ans

✗ 1. 49S

✗ 2. 38R

✗ 3. 41R

✔ 4. 43R

Question ID : **5038909099**

Status : **Answered**

Chosen Option : **4**

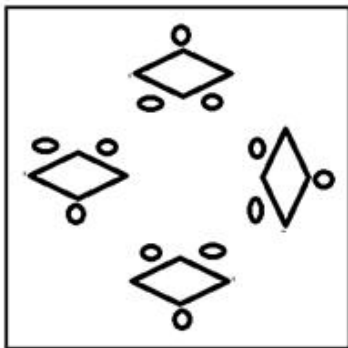**Q.2** The following figures show the sequence of folding a piece of paper. The last figure shows the manner in which the folded paper has been cut. Choose a figure that would most closely resemble the unfolded form of the paper.
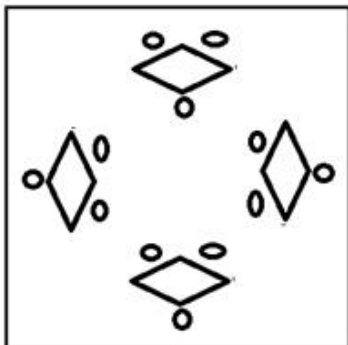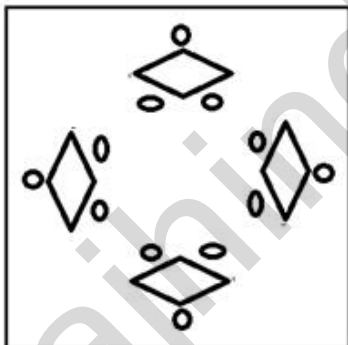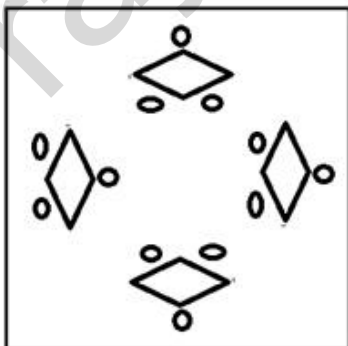
Ans

✗ 1.

✗ 2.

✔ 3.

✗ 4.
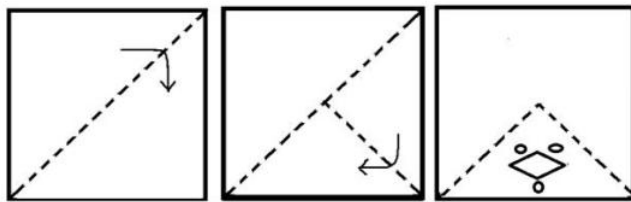
Question ID : **5038909091**
Status : **Answered**
Chosen Option : **3**

Q.3 दिए गए विकल्पों के शब्द-युग्मों बीच किस विकल्प में ठीक उसी प्रकार का संबंध है जिस प्रकार का संबंध नीचे दिए गए शब्द-युग्म में है।

यहूदी : सिनेगॉग

Ans ✔ 1. ईसाई : चर्च

✘ 2. मुसलमान : मंदिर

✘ 3. हिंदू : अगियारी

✘ 4. सिख : मस्जिद

Question ID : **5038909094**
Status : **Answered**
Chosen Option : **1**

Q.4 Which of the following options will replace the question mark (?) and complete the given number series?

4, 24, 6, 48, 8, ? , 10, 120

Ans ✘ 1. 56

✘ 2. 100

✔ 3. 80

✘ 4. 96

Question ID : **5038909105**
Status : **Answered**
Chosen Option : **3**

Q.5 Which of the following options will replace the question mark (?) and complete the given number series?

8, 10, 13, 20, 18, 30, ?

Ans ✘ 1. 20

✘ 2. 42

✔ 3. 23

✘ 4. 40

Question ID : **5038909107**
Status : **Answered**
Chosen Option : **3**

Q.6 The ratio of the age of Antonio to the age of Herton is 5:7. After 8 years, this ratio will become 3:4. What is the difference in years between their ages?

Ans ✘ 1. 20

✘ 2. 10

✘ 3. 12

✔ 4. 16

Question ID : **5038909108**
Status : **Answered**
Chosen Option : **4**

Q.7 Which of the following options will replace the question mark (?) and complete the given number series?

8, 41, 11, 43, 14, 45, ?

Ans ✗ 1. 16

✓ 2. 17

✗ 3. 48

✗ 4. 47

Question ID : **5038909106**
Status : **Answered**
Chosen Option : **2**

Q.8 If in a certain coding language, 'DESIRE' is written as 'EDISER' and 'COURSE' is written as 'OCRUES'. How will 'DEMAND' be written in that coding language?

Ans ✗ 1. EDMADN

✗ 2. DNAMED

✓ 3. EDAMDN

✗ 4. EDAMND

Question ID : **5038909100**
Status : **Answered**
Chosen Option : **3**

Q.9 If the price of petrol rises from Rs. 56 per litre to Rs.70 per litre. For a person who does not wish to increase the expenditure on petrol, by how much percent will he/she have to reduce his/her consumption of petrol?

Ans ✗ 1. 10 percent

✓ 2. 20 percent

✗ 3. 15 percent

✗ 4. 30 percent

Question ID : **5038909109**
Status : **Answered**
Chosen Option : **2**

Q.10 What is the maximum number of triangles in the figure given below?
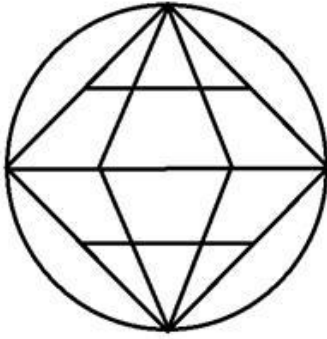
Ans ✔ 1. 24

✘ 2. 20

✘ 3. 22

✘ 4. 25

Question ID : **5038909092**
Status : **Answered**
Chosen Option : **1**

Q.11 In a certain coding language, 'AGREE' is written as 'GAREE' and 'ADOPT' is written as 'DAOTP'.
How will 'ADULT' be written in that coding language?

Ans ✘ 1. DAULT

✘ 2. DALTU

✔ 3. DAUTL

✘ 4. DUATL

Question ID : **5038909103**
Status : **Answered**
Chosen Option : **3**

Q.12 उस विकल्प का चयन कीजिए जो तीसरे शब्द से उसी तरह से संबंधित है जिस तरह दूसरे शब्द पहले शब्द से संबंधित है।

विनाश : युद्ध :: प्रदूषण : ?

Ans ✘ 1. स्वच्छता

✘ 2. सफाई

✘ 3. हवा

✔ 4. औद्योगिक उत्सर्जन

Question ID : **5038909097**
Status : **Answered**
Chosen Option : **4**

Q.13 Identify the figure that completes the below pattern.

Ans

✗ 1.

✗ 2.

✔ 3.

✗ 4.
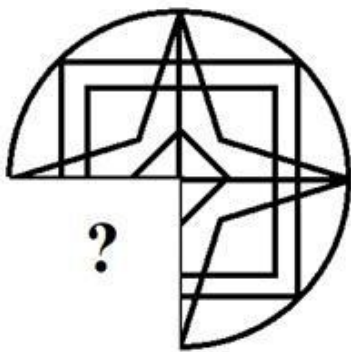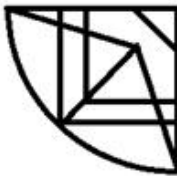
Question ID : **5038909088**
Status : **Answered**
Chosen Option : **1**

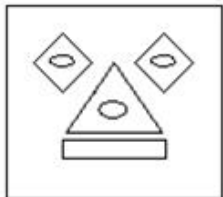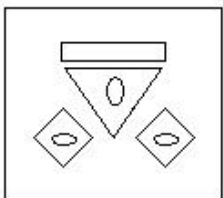**Q.14** Which of the following figures will complete the pattern of the figure given below?
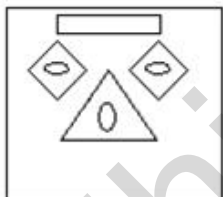

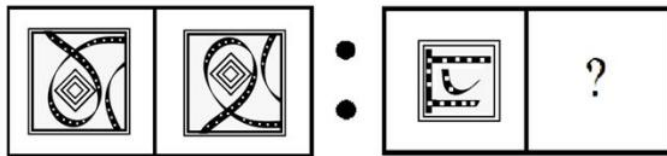**Ans**

✗ 1.

✗ 2.

✔ 3.

✗ 4.
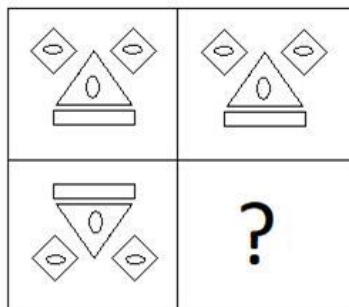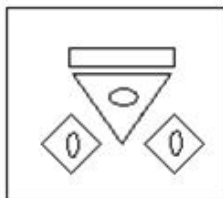
Question ID : **5038909093**
Status : **Answered**
Chosen Option : **3**

Q.15 Select the option that is related to the third figure in the same way as the second figure is related to the first figure.

Ans

✗ 1.

✗ 2.

✔ 3.

✗ 4.

Question ID : 5038909084
Status : **Answered**
Chosen Option : **3**

Q.16 A, E का भाई है, F, E की बहन है। C, A के अंकल का इकलौता बेटा है। B और D, C के पापा के इकलौते भाई की बेटियां हैं। D, A से किस प्रकार संबंधित है?

Ans
✗ 1. मामी / मौसी / चाची / बुआ
✗ 2. भाई
✔ 3. बहन
✗ 4. माँ

Question ID : 5038909113
Status : **Answered**
Chosen Option : **1**

Q.17 Which of the following options will replace the question mark (?) and complete the given number series?

229, 104, ?, 13, 5

Ans ✗ 1. 50

✗ 2. 4

✗ 3. 36

✓ 4. 40

Question ID : **5038909104**

Status : **Answered**

Chosen Option : **1**

Q.18 Select the option that is related to the third word in the same way as the second word is related to the first word.
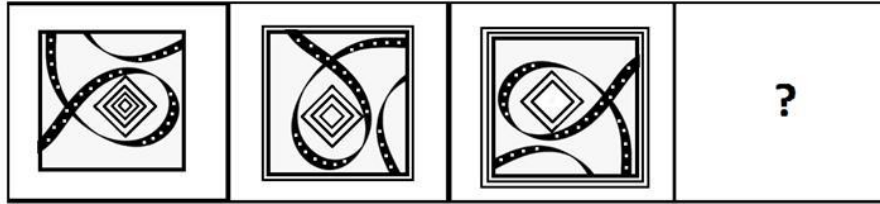
Camel : Rajasthan :: Clouded Leopard : ?

Ans ✗ 1. Goa

✓ 2. Meghalaya

✗ 3. Gujarat

✗ 4. Tamilnadu

Question ID : **5038909095**

Status : **Answered**

Chosen Option : **1**

Q.19 Select a suitable figure from the answer figures that would replace the question mark (?)
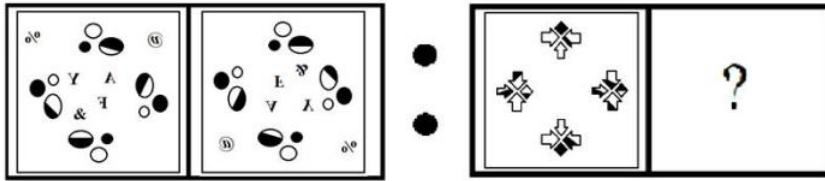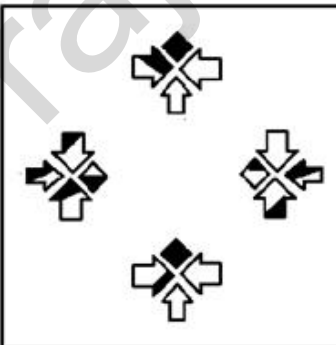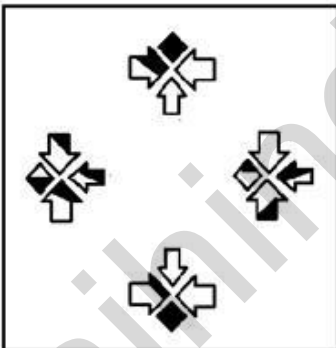

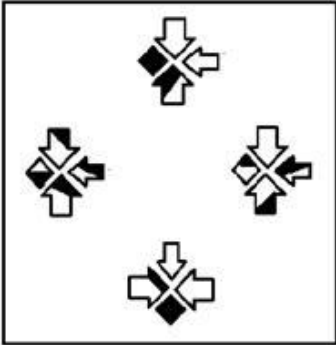Ans

✗ 1.

✗ 2.

✔ 3.

✗ 4.

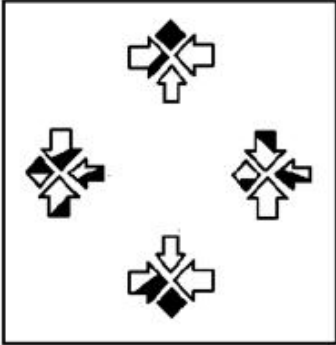Question ID : **5038909080**
Status : **Answered**
Chosen Option : **3**

Q.20 Select the option that is related to the third figure in the same way as the second figure is related to the first figure.
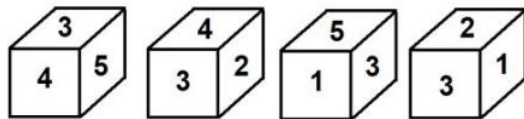
Ans

✗ 1.

✗ 2.

✔ 3.

✗ 4.

Question ID : **5038909085**
Status : **Answered**
Chosen Option : **3**

Q.21 Four positions of a die are given below. Which number will be on the face opposite to the face with number 1?

Ans ✓ 1. 4

✗ 2. 5

✗ 3. 2

✗ 4. 3

Question ID : **5038909083**
Status : **Answered**
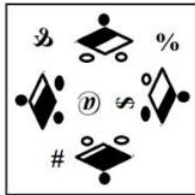Chosen Option : **1**

Q.22 In a certain coding language, 'BOOK' is written as 'CQRO' and and 'PEN' is written as 'QGQ'. How will 'PAGE' be written in that coding language?

Ans ✗ 1. QCIH

✓ 2. QCJI

✗ 3. QCJJ

✗ 4. QBIH

Question ID : **5038909102**
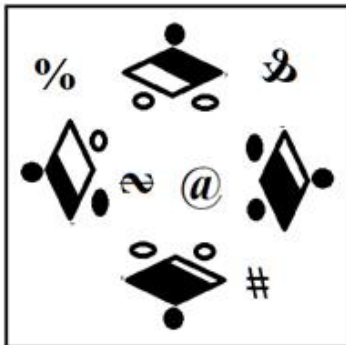Status : **Answered**
Chosen Option : **2**

Q.23 Which of the answer figures is the exact mirror image of the given problem figure when the mirror is held at the right side?

Problem Figure:

Ans

✗ 1.

✗ 2.

✔ 3.

✗ 4.
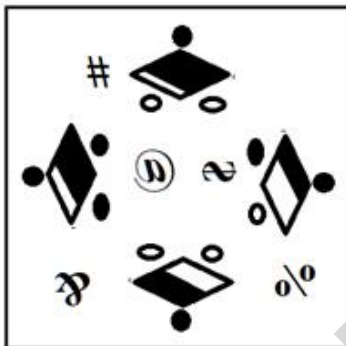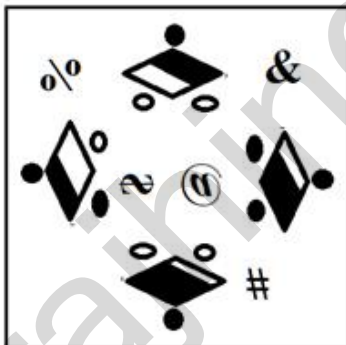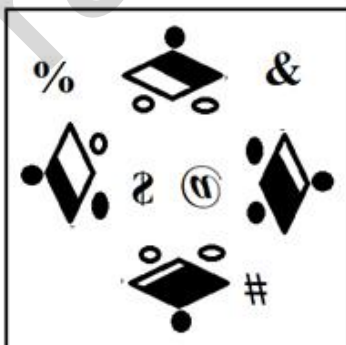
Question ID : **5038909086**
Status : **Answered**
Chosen Option : **3**

Q.24 दिए गए विकल्पों में से तीन किसी न किसी तरह से एकसमान हैं और एक असमान है। उस असमान विकल्प का चयन कीजिए।

Ans ✗ 1. अपूर्णता

✔ 2. पापी

✗ 3. दोष

✗ 4. त्रुटि

Question ID : **5038909110**
Status : **Answered**
Chosen Option : **2**

Q.25 Select the option figure in which the given figure is embedded (rotation is NOT allowed).

Ans

✗ 1.

✗ 2.

✗ 3.

✔ 4.
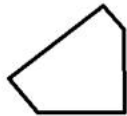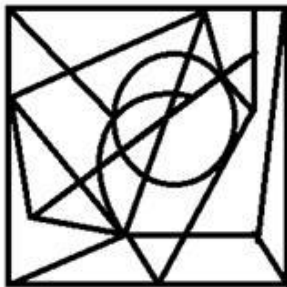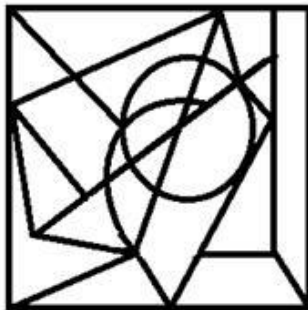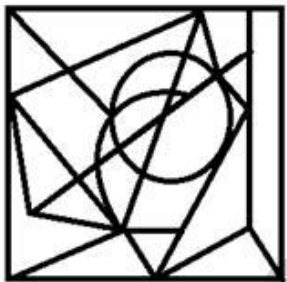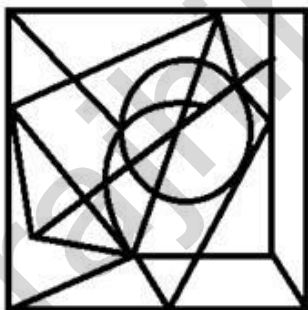
Question ID : **5038909089**
Status : **Answered**
Chosen Option : **3**

Q.26 Select a suitable figure from the answer figures that would replace the question mark (?)

Ans

✗ 1.

✗ 2.

✗ 3.

✔ 4.
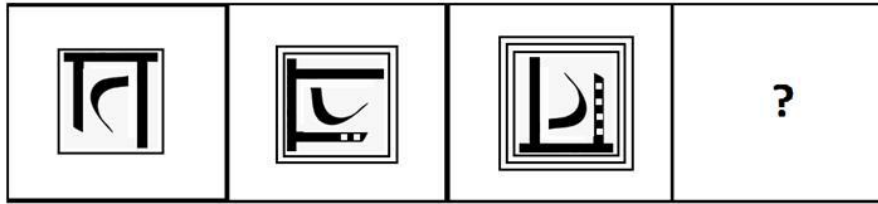
Question ID : **5038909081**
Status : **Answered**
Chosen Option : **4**

Q.27 A is the brother of E, F is the sister of E. C is the only son of A's uncle. B and D are the daughters of the only brother of C's father.

How is C related to F?

Ans ✔ 1. Cousin

✘ 2. Brother

✘ 3. Sister

✘ 4. Son

Question ID : **5038909112**

Status : **Answered**

Chosen Option : **2**

Q.28 Which of the answer figures is the exact water image of the given problem figure?

Problem Figure:

Ans

✗ 1.

✔ 2.

✗ 3.

✗ 4.

Question ID : **5038909082**

... 33
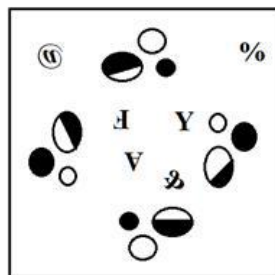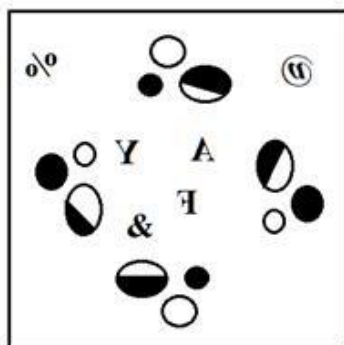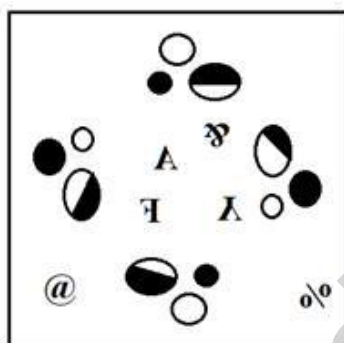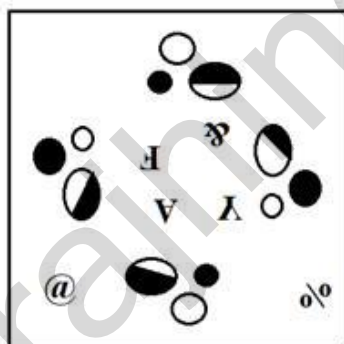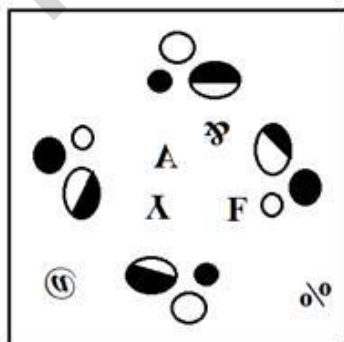
Status : **Answered**

Chosen Option : **4**

Q.29 उस विकल्प का चयन कीजिए जो तीसरे शब्द से उसी तरह से संबंधित है जिस तरह दूसरा शब्द पहले शब्द से संबंधित है।

चौकन्ना : सुस्त :: सघन : ?

Ans   ✘ 1. न्यून

✘ 2. प्रबल

✘ 3. तरल

✔ 4. विस्तीर्ण

Question ID : **5038909096**

Status : **Answered**

Chosen Option : **3**

Q.30 Three of the following four figures are alike in some manner whereas one is different. Select the odd figure.

Ans

✗ 1.

✗ 2.

✔ 3.

✗ 4.
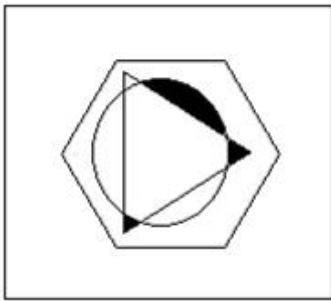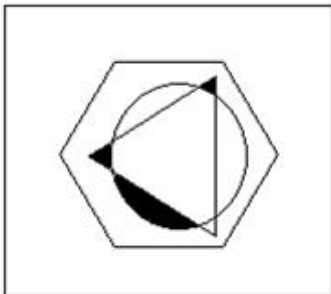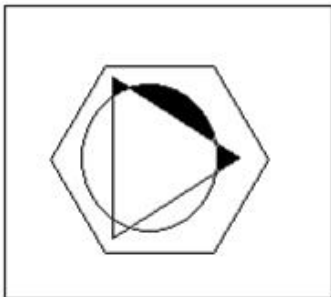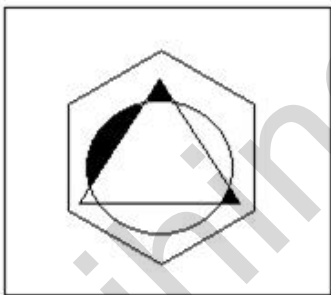
Question ID : **5038909098**

Status : **Answered**

Chosen Option : **3**

Q.31 निम्नलिखित में से विषम का चयन करें। (संकेत: राजधानी शहर)

Ans

✗ 1. तिरुवनन्तपुरम

✗ 2. भुवनेश्वर

✗ 3. ईटानगर

✔ 4. अहमदाबाद

Question ID : **5038909111**

Status : **Answered**

Chosen Option : **1**

Q.32 The following figures show the sequence of folding a piece of paper. The last figure shows the manner in which the folded paper has been cut. Choose a figure that would most closely resemble the unfolded form of the paper.

Ans

✗ 1.

✔ 2.

✗ 3.

✗ 4.
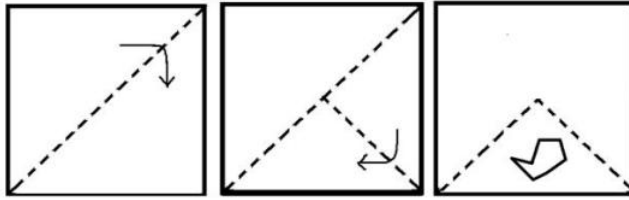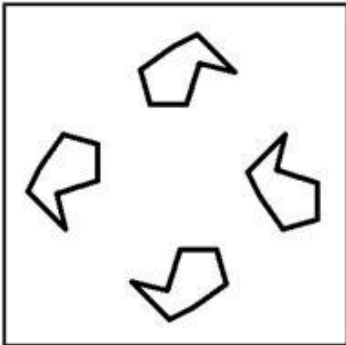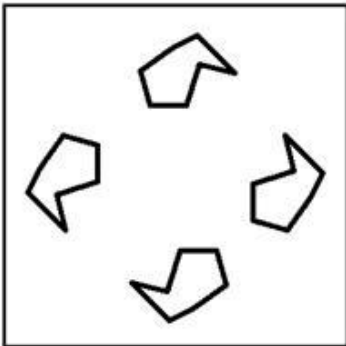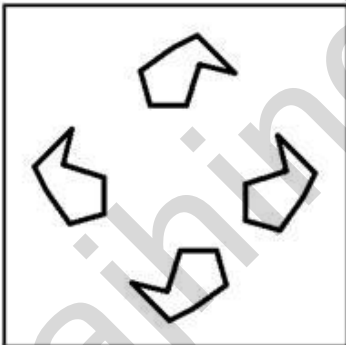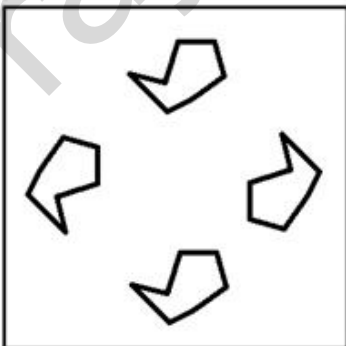
Question ID : **5038909090**
Status : **Answered**
Chosen Option : **2**

Q.33 In a certain coding language, 'ADULT' is written as 'UMVEB' and 'YOUNG' is written as 'HOVPZ'. How will 'CHILD' be written in that coding language?

Ans ✗ 1. EMIID

✓ 2. EMJID

✗ 3. DMJIE

✗ 4. DIJME

Question ID : **5038909101**

Status : **Answered**

Chosen Option : **2**

Q.34 What is the maximum number of triangles in the figure given below?
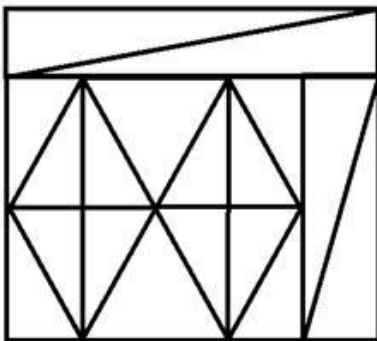
Ans ✗ 1. 24

✓ 2. 26

✗ 3. 28

✗ 4. 22

Question ID : **5038909087**

Status : **Answered**

Chosen Option : **3**

Section : **Domain Knowledge**

Q.1 In recursive systems, the output depends on:

Ans ✗ 1. present and past inputs

✓ 2. present input, past inputs and previous outputs

✗ 3. only present input

✗ 4. present input and previous outputs

Question ID : **5038909139**

Status : **Answered**

Chosen Option : **1**

Q.2 For an ideal two winding transformer, which of the following is INCORRECT?

Ans ✔ 1. Magnetising curve for the core is non-linear

✘ 2. Winding resistances are negligible

✘ 3. Core losses are negligible

✘ 4. All the flux is confined to the magnetic core

Question ID : **5038909188**

Status : **Answered**

Chosen Option : **2**

Q.3 How many general purpose registers are there in 8085 microprocessor to store 8-bit data?

Ans ✘ 1. 5

✘ 2. 7

✘ 3. 8

✔ 4. 6

Question ID : **5038909167**

Status : **Answered**

Chosen Option : **2**

Q.4 If K represents the open-loop gain, then as K approaches zero, the root-loci approaches towards:

Ans ✘ 1. open loop zeroes

✘ 2. $j\omega - axis$

✘ 3. breakaway points

✔ 4. open loop poles

Question ID : **5038909174**

Status : **Answered**

Chosen Option : **3**

Q.5 The Thevenin's voltage across terminal 'a' and 'b' in the following circuit is _____.
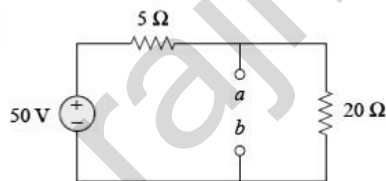
Ans ✘ 1. 50 V

✘ 2. 20 V

✘ 3. 10 V

✔ 4. 40 V

Question ID : **5038909120**

Status : **Answered**

Chosen Option : **4**

Q.6 A 50 cm long conductor is placed in a uniform magnetic field of flux density 0.12 T. If the conductor carries a current of 15 A, determine the force on the conductor.

Ans ✗ 1. 0.45 N

✗ 2. 9.0 N

✔ 3. 0.9 N

✗ 4. 90 N

Question ID : **5038909127**

Status : **Answered**

Chosen Option : **2**

Q.7 Which of the following faults is a symmetrical fault on a three-phase line?

Ans ✔ 1. L – L – L

✗ 2. L – G

✗ 3. L – L

✗ 4. L – L – G

Question ID : **5038909148**

Status : **Answered**

Chosen Option : **1**

Q.8 The maximum demand on a power station is 100 MW. If the annual load factor is 50 percent, calculate the total energy generated in a year.

Ans ✔ 1. 4380×10^5 kWh

✗ 2. 4380×10^8 kWh

✗ 3. 8760×10^8 kWh

✗ 4. 8760×10^5 kWh

Question ID : **5038909144**

Status : **Answered**

Chosen Option : **4**

Q.9 The steady state error is determined as the difference between the reference input and the system output at _____.

Ans ✔ 1. $t = \infty$

✗ 2. t = 0

✗ 3. t = time constant

✗ 4. $t = t_p$

Question ID : **5038909170**

Status : **Answered**

Chosen Option : **1**

Q.10 The frequency of the e.m.f. in the stator of a 4-pole induction motor is 50 Hz and that in the rotor is 1.5 Hz. Find the speed at which the motor is running.

Ans ✓ 1. 1455 rpm

✗ 2. 1050 rpm

✗ 3. 1500 rpm

✗ 4. 500 rpm

Question ID : **5038909197**

Status : **Answered**

Chosen Option : **1**

Q.11 The circulation of a vector field around a closed path is given by _____ of a vector.

Ans ✓ 1. Curl

✗ 2. Divergence

✗ 3. Gradient

✗ 4. Laplacian

Question ID : **5038909125**

Status : **Answered**

Chosen Option : **1**

Q.12 Which of the following time intervals is NOT included in the total turn-on time of a thyristor?

Ans ✗ 1. Delay time

✓ 2. Gate recovery time

✗ 3. Spread time

✗ 4. Rise time

Question ID : **5038909153**

Status : **Answered**

Chosen Option : **4**

Q.13 Which one of the following statements is INCORRECT with regard to the open loop control system?

Ans ✗ 1. Its overall cost is low

✗ 2. It is easy to maintain

✓ 3. It has a feedback element

✗ 4. It is simple in construction

Question ID : **5038909169**

Status : **Answered**

Chosen Option : **3**

Q.14 Which fault is being symbolised by the following figure?
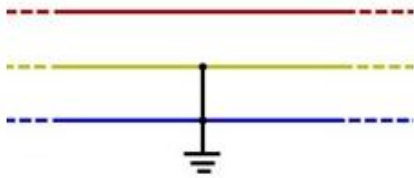
Ans ✗ 1. L – L fault

✓ 2. L – L – G fault

✗ 3. L – G fault

✗ 4. L – L – L fault

Question ID : **5038909149**
Status : **Answered**
Chosen Option : **2**

Q.15 The reluctance offered by a magnetic circuit of a unit length and unit cross-section is called _____.

Ans ✗ 1. permeance

✗ 2. absolute permeability

✓ 3. reluctivity

✗ 4. permittivity

Question ID : **5038909124**
Status : **Answered**
Chosen Option : **2**

Q.16 Which of the following devices is also known as COMFET?

Ans ✗ 1. GTO

✗ 2. SITH

✓ 3. IGBT

✗ 4. MCT

Question ID : **5038909158**
Status : **Answered**
Chosen Option : **3**

Q.17 The stator of a three-phase induction motor has 3 slots per pole per phase. Calculate the total number of slots.

Ans ✗ 1. 18

✓ 2. 54

✗ 3. 36

✗ 4. 27

Question ID : **5038909194**
Status : **Answered**
Chosen Option : **3**

Q.18 A series RC circuit has $|V_R| = 12$ V and $|V_C| = 5$ V. The magnitude of the supply voltage is:

Ans ✗ 1. 7 V

✗ 2. $-7\,V$

✓ 3. 13 V

✗ 4. 17 V

Question ID : **5038909122**
Status : **Answered**
Chosen Option : **3**

Q.19 In alternators, the coil-span factor for full pitched coil is _____ and that for short-pitched coil is _____, respectively.

Ans ✗ 1. unity, zero

✓ 2. unity, less than unity

✗ 3. less than unity, unity

✗ 4. zero, unity

Question ID : **5038909196**
Status : **Answered**
Chosen Option : **2**

Q.20 A _____ is best suited for driving cranes and hoists.

Ans ✓ 1. DC series motor

✗ 2. stepper motor

✗ 3. DC shunt motor

✗ 4. synchronous motor

Question ID : **5038909190**
Status : **Answered**
Chosen Option : **1**

Q.21 A generating station has a connected load of 50 MW and a maximum demand of 20 MW. Find the demand factor.

Ans ✓ 1. 0.4

✗ 2. 0.5

✗ 3. 2.5

✗ 4. 0.75

Question ID : **5038909142**
Status : **Answered**
Chosen Option : **1**

Q.22 Which of the following is an INCORRECT type of amplitude scaling operation?

Ans
  ✗ 1. Addition

  ✗ 2. Attenuation

  ✗ 3. Amplification

  ✔ 4. Expansion

Question ID : **5038909136**
Status : **Answered**
Chosen Option : **3**

Q.23 Which of the following devices is unidirectional?

Ans
  ✗ 1. MOSFET

  ✗ 2. TRIAC

  ✗ 3. DIAC

  ✔ 4. SCR

Question ID : **5038909150**
Status : **Answered**
Chosen Option : **1**

Q.24 In an 8085 microprocessor, which of the following instructions means 'Jump to 16-bit address if the sign flag is set'?

Ans
  ✔ 1. JM 16 bit

  ✗ 2. JC 16 bit

  ✗ 3. JP 16 bit

  ✗ 4. JPE 16 bit

Question ID : **5038909168**
Status : **Answered**
Chosen Option : **2**

Q.25 Calculate the highest speed at which the 60 Hz alternator can be operated.

Ans
  ✗ 1. 3000 rpm

  ✗ 2. 2400 rpm

  ✔ 3. 3600 rpm

  ✗ 4. 4200 rpm

Question ID : **5038909195**
Status : **Answered**
Chosen Option : **1**

Q.26 For the following circuit, find the conductance.

Ans
  ✗ 1. 10 µS
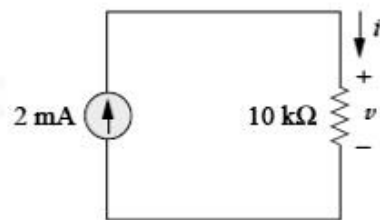
  ✗ 2. 10 mS

  ✔ 3. 100 µS

  ✗ 4. 100 mS

> Question ID : **5038909117**
> Status : **Answered**
> Chosen Option : **3**

Q.27 Calculate the number of branches and nodes in following circuit.
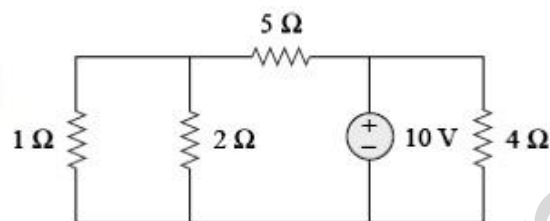
Ans
  ✔ 1. 5 branches, 3 nodes

  ✗ 2. 10 branches, 3 nodes

  ✗ 3. 5 branches, 5 nodes

  ✗ 4. 10 branches, 8 nodes

> Question ID : **5038909118**
> Status : **Answered**
> Chosen Option : **3**

Q.28 Which type of chopper operates only in a second quadrant?

Ans
  ✗ 1. Class D

  ✗ 2. Class C

  ✔ 3. Class B

  ✗ 4. Class A

> Question ID : **5038909156**
> Status : **Answered**
> Chosen Option : **3**

Q.29 The function y(n) = x(2n) is an example of _____.

Ans   ✗ 1. folding

✗ 2. time advance

✓ 3. compression

✗ 4. expansion

Question ID : **5038909135**
Status : **Answered**
Chosen Option : **3**

Q.30 Find the voltage v_1 in the following circuit.
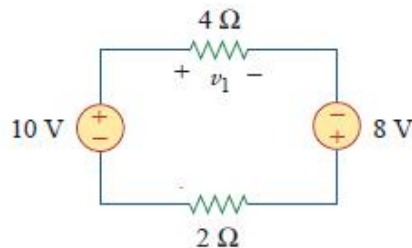
Ans   ✗ 1. 9 V

✗ 2. 3 V

✗ 3. 6 V

✓ 4. 12 V

Question ID : **5038909119**
Status : **Answered**
Chosen Option : **1**

Q.31 Which law is used to obtain the differential magnetic field intensity at a point due to a differential current element?

Ans   ✓ 1. Biot-Savart law

✗ 2. Faraday's law

✗ 3. Lenz's law

✗ 4. Ampere's law

Question ID : **5038909184**
Status : **Answered**
Chosen Option : **4**

Q.32 Which of the following is NOT a VALID property of Curl?

Ans   ✗ 1. The curl of gradient of a vector is zero

✗ 2. The curl of a vector is a vector quantity

✗ 3. The curl of a scalar makes no sense

✔ 4. The divergence of a curl is always non-zero

Question ID : **5038909175**
Status : **Answered**
Chosen Option : **4**

Q.33 A network has 10 independent loops and 7 nodes. The number of branches in the network will be _____.

Ans   ✗ 1. 10

✗ 2. 12

✗ 3. 14

✔ 4. 16

Question ID : **5038909115**
Status : **Answered**
Chosen Option : **4**

Q.34 In an 8085 microprocessor, which of the following is a 2-byte instruction?

Ans   ✗ 1. MOV B,A

✗ 2. NOP

✗ 3. JMP 2050 H

✔ 4. OUT 01 H

Question ID : **5038909166**
Status : **Answered**
Chosen Option : **2**

Q.35 In series type ohmmeters, zero adjustment should be done by:

Ans   ✗ 1. changing the series as well as shunt resistance together

✗ 2. changing the series resistance

✗ 3. changing the battery voltage

✔ 4. changing the shunt resistance across the meter movement

Question ID : **5038909185**
Status : **Answered**
Chosen Option : **4**

Q.36 The closed-loop transfer function of a linear time-invariant system has multiple poles on jω-axis. Comment on the stability.

Ans

✗ 1. Stable

✔ 2. Unstable

✗ 3. Relatively stable

✗ 4. Marginally stable

Question ID : **5038909177**

Status : **Answered**

Chosen Option : **4**

Q.37 Which of the following signals is called delta function?

Ans

✗ 1. Unit ramp

✗ 2. Exponential

✔ 3. Unit impulse

✗ 4. Unit step

Question ID : **5038909134**

Status : **Answered**

Chosen Option : **3**

Q.38 The ratio of electric flux density and electric field intensity is the _____ of the medium in which the charge is located.

Ans

✔ 1. permittivity

✗ 2. reluctivity

✗ 3. resistivity

✗ 4. conductivity

Question ID : **5038909130**

Status : **Answered**

Chosen Option : **1**

Q.39 A single-phase half-bridge inverter has a DC voltage source Vs = 200 V. Find the rms value of the fundamental component of the output voltage.

Ans

✔ 1. 90 V

✗ 2. 100 V

✗ 3. 180 V

✗ 4. 200 V

Question ID : **5038909155**

Status : **Answered**

Chosen Option : **2**

Q.40 In which of the following cases the use of autotransformer is more economical as compared to a two-winding transformer?

Ans ✔️ 1. Voltage ratio is 0.9

❌ 2. Voltage ratio is 0.5

❌ 3. Voltage ratio is 0.75

❌ 4. Voltage ratio is 0.1

Question ID : **5038909189**
Status : **Answered**
Chosen Option : **3**

Q.41 In a three-phase semiconverter, firing angle is 30°. The freewheeling diode will conduct for:

Ans ❌ 1. 120°

❌ 2. 30°

❌ 3. 150°

✔️ 4. 0°

Question ID : **5038909159**
Status : **Answered**
Chosen Option : **3**

Q.42 The energy of a power signal is _____.

Ans ❌ 1. zero

❌ 2. finite

❌ 3. unity

✔️ 4. infinite

Question ID : **5038909133**
Status : **Answered**
Chosen Option : **4**

Q.43 Which of the following is RC feedback oscillator?

Ans ✔️ 1. Wien bridge oscillator

❌ 2. Hartley oscillator

❌ 3. Colpitts oscillator

❌ 4. Clapp oscillator

Question ID : **5038909165**
Status : **Answered**
Chosen Option : **1**

Q.44 **With the help of which theorem the surface integral can be converted into a volume integral?**

Ans
  ✗ 1. Biot-Savart's theorem

  ✗ 2. Curl theorem

  ✓ 3. Divergence theorem

  ✗ 4. Stoke's theorem

Question ID : **5038909131**

Status : **Answered**

Chosen Option : **4**

Q.45 **The charge density of a surface charge is measured in _____.**

Ans
  ✓ 1. Coulomb/square metre

  ✗ 2. Coulomb/cubic metre

  ✗ 3. Coulomb/metre

  ✗ 4. Coulomb

Question ID : **5038909129**

Status : **Answered**

Chosen Option : **2**

Q.46 **Which of the following is INCORRECT with regard to PMMC instrument?**

Ans
  ✗ 1. Very high accuracy

  ✗ 2. No hysteresis error

  ✗ 3. High torque to weight ratio

  ✓ 4. Non-uniform scale

Question ID : **5038909178**

Status : **Answered**

Chosen Option : **2**

Q.47 A Norton circuit with 10 A current source and 15 Ω Norton's resistance is connected across a 5 Ω load resistance. The current in 5 Ω load resistance will be _____.

Ans
  ✗ 1. 5 A

  ✗ 2. 10 A

  ✓ 3. 7.5 A

  ✗ 4. 2.5 A

Question ID : **5038909121**

Status : **Answered**

Chosen Option : **4**

Q.48 Which of the following systems is an example of dynamic system?

Ans

✗ 1. $y(n) = n\,x(n) + b\,x^2(n)$

✗ 2. y(n) = n x(n)

✗ 3. y(n) = 3 x(n) + 5

✓ 4. y(n) = x(-n)

Question ID : **5038909137**

Status : **Answered**

Chosen Option : **4**

Q.49 With reference to the signal flow graph, a loop with single node and single branch is called:

Ans

✗ 1. non-touching loop

✓ 2. self loop

✗ 3. touching loop

✗ 4. mixed loop

Question ID : **5038909173**

Status : **Answered**

Chosen Option : **1**

Q.50 For a series string of six SCRs, efficiency is 90 percent. Find the derating factor.

Ans

✗ 1. 20 percent

✓ 2. 10 percent

✗ 3. 5 percent

✗ 4. 15 percent

Question ID : **5038909157**

Status : **Answered**

Chosen Option : **2**

Q.51 Which of the following is NOT a part of steam power station?

Ans

✓ 1. Penstocks

✗ 2. Superheater

✗ 3. Condenser

✗ 4. Boiler

Question ID : **5038909141**

Status : **Answered**

Chosen Option : **1**

Q.52 A 120 V DC motor has armature resistance of 0.5 Ω and back e.m.f. of 110 V. Find the armature current.

Ans
✗ 1. 220 A

✗ 2. 10 A

✔ 3. 20 A

✗ 4. 240 A

Question ID : **5038909191**
Status : **Answered**
Chosen Option : **3**

Q.53 Which of the following devices can be turned off by a negative gate pulse?

Ans
✗ 1. DIAC

✗ 2. TRIAC

✗ 3. SCR

✔ 4. GTO

Question ID : **5038909151**
Status : **Answered**
Chosen Option : **4**

Q.54 In CRO, the 'delay line' introduces delays of _____ to the vertical signal.

Ans
✔ 1. 150 ns to 1 ms

✗ 2. 10 ns to 100 ns

✗ 3. 15 ms to 100 ms

✗ 4. 100 ms to 1s

Question ID : **5038909187**
Status : **Answered**
Chosen Option : **1**

Q.55 A 250 V shunt motor with armature resistance of 0.5 Ω runs at 600 rpm on full load and takes an armature current of 20 A. If resistance of 1 Ω is placed in the armature circuit, find the speed at full load torque.

Ans
✔ 1. 550 rpm

✗ 2. 450 rpm

✗ 3. 500 rpm

✗ 4. 600 rpm

Question ID : **5038909193**
Status : **Answered**
Chosen Option : **1**

Q.56 The closed loop voltage gain of a/an_____ is 1.

Ans
- ✗ 1. integrator
- ✗ 2. differentiator
- ✔ 3. voltage follower
- ✗ 4. comparator

Question ID : **5038909164**
Status : **Answered**
Chosen Option : **3**

Q.57 In a common base configuration, I_B = 0.05 mA and I_C = 0.95 mA. Find the value of current amplification factor.

Ans
- ✗ 1. 1.0
- ✗ 2. 0.90
- ✗ 3. 0.5
- ✔ 4. 0.95

Question ID : **5038909162**
Status : **Answered**
Chosen Option : **4**

Q.58 An electric iron draws 2 A current at 120 V. Find the resistance.

Ans
- ✔ 1. $60 \, \Omega$
- ✗ 2. $30 \, \Omega$
- ✗ 3. $120 \, \Omega$
- ✗ 4. $240 \, \Omega$

Question ID : **5038909114**
Status : **Answered**
Chosen Option : **1**

Q.59 Which of the following commutation techniques is a line commutation?

Ans
- ✗ 1. Class A
- ✗ 2. Class B
- ✗ 3. Class E
- ✔ 4. Class F

Question ID : **5038909152**
Status : **Answered**
Chosen Option : **1**

Q.60 Belted cables used to deliver three-phase power are generally used for the voltages _____.

Ans
- ✔ 1. up to 11 kV
- ✘ 2. from 66 kV to 132 kV
- ✘ 3. above 132 kV
- ✘ 4. from 33 kV to 66 kV

Question ID : **5038909147**
Status : **Answered**
Chosen Option : **2**

Q.61 As compared to half bridge inverter, in a full bridge inverter, the output power delivered to load is:

Ans
- ✘ 1. same
- ✘ 2. two times
- ✘ 3. half
- ✔ 4. four times

Question ID : **5038909154**
Status : **Answered**
Chosen Option : **4**

Q.62 Which of the following is NOT a desirable property of OPAMP?

Ans
- ✘ 1. Low output impedance
- ✘ 2. Large open loop voltage gain
- ✔ 3. Low input impedance
- ✘ 4. Large CMRR

Question ID : **5038909163**
Status : **Answered**
Chosen Option : **3**

Q.63 Super tension cables are manufactured for the voltage _____.

Ans
- ✘ 1. above 132 kV
- ✘ 2. up to 11 kV
- ✔ 3. from 22 kV to 33 kV
- ✘ 4. from 33 kV to 66 kV

Question ID : **5038909145**
Status : **Answered**
Chosen Option : **1**

Q.64 Which type of insulation material is also known as 'empire tape'?

Ans
- ✗ 1. Polyvinyl chloride
- ✔ 2. Varnished cambric
- ✗ 3. Impregnated paper
- ✗ 4. Vulcanized Indian rubber

Question ID : **5038909146**
Status : **Answered**
Chosen Option : **4**

Q.65 In an energy-meter, the major cause of creeping is:

Ans
- ✔ 1. overcompensation for friction
- ✗ 2. excessive voltage across the potential coil
- ✗ 3. stray magnetic fields
- ✗ 4. mechanical vibrations

Question ID : **5038909182**
Status : **Answered**
Chosen Option : **1**

Q.66 In DC machines, the use of wave winding is prohibited if the armature currents exceeds _____.

Ans
- ✔ 1. 300 A
- ✗ 2. 150 A
- ✗ 3. 50 A
- ✗ 4. 100 A

Question ID : **5038909198**
Status : **Answered**
Chosen Option : **3**

Q.67 In a 6-node network, how many node voltages will be defined for nodal analysis?

Ans
- ✔ 1. 5
- ✗ 2. 4
- ✗ 3. 6
- ✗ 4. 7

Question ID : **5038909116**
Status : **Answered**
Chosen Option : **1**

Q.68 "The electric flux passing through any closed surface is equal to the total charge enclosed by that surface." Which law is given by this statement?

Ans ✔ 1. Gauss's law

✘ 2. Faraday's law

✘ 3. Coulomb's law

✘ 4. Ampere's law

Question ID : **5038909128**

Status : **Answered**

Chosen Option : **4**

Q.69 A series RLC circuit has R = 30 Ω, $|X_C| = 50\,\Omega$ and $|X_L| = 90\,\Omega$. The impedance of the circuit is:

Ans ✘ 1. $30 + j\,140\;\Omega$

✘ 2. $30 - j\,40\;\Omega$

✔ 3. $30 + j\,40\;\Omega$

✘ 4. $-30 + j\,40\;\Omega$

Question ID : **5038909123**

Status : **Answered**

Chosen Option : **3**

Q.70 In a common base configuration, $I_E = 1$ mA and $I_C = 0.90$ mA. Find I_B.

Ans ✘ 1. 1.9 mA

✘ 2. 1.0 mA

✔ 3. 0.1 mA

✘ 4. 0.9 mA

Question ID : **5038909161**

Status : **Answered**

Chosen Option : **3**

Q.71 In an induction type wattmeter:

Ans ✘ 1. current coil is the moving coil

✘ 2. voltage coil is the moving coil

✔ 3. voltage coil and current coil both are stationary

✘ 4. voltage coil and current coil both are moving

Question ID : **5038909181**

Status : **Answered**

Chosen Option : **2**

Q.72 The Z-Transform of advanced unit impulse function $\delta (n + k)$ is:

Ans
  ✗ 1. X(Z) = k

  ✗ 2. X(Z) = 1

  ✗ 3. $X(Z) = Z^{-k}$

  ✓ 4. $X(Z) = Z^{k}$

Question ID : **5038909140**

Status : **Answered**

Chosen Option : **3**

Q.73 Air friction damping is used in _____ instruments.

Ans
  ✗ 1. PMMC type

  ✗ 2. hot wire type

  ✓ 3. moving iron type

  ✗ 4. induction type

Question ID : **5038909180**

Status : **Answered**

Chosen Option : **1**

Q.74 A 400 V, 5 HP DC motor has a cold armature resistance of 0.25 Ω and a full load current of 50 A. If this motor is started from the line directly, what will be the starting current drawn by the motor?

Ans
  ✗ 1. 50 A

  ✗ 2. 1000 A

  ✓ 3. 1600 A

  ✗ 4. 500 A

Question ID : **5038909192**

Status : **Answered**

Chosen Option : **1**

Q.75 Laplacian of scalar V is denoted as:

Ans
  ✓ 1. $\nabla^2 V$

  ✗ 2. ∇V

  ✗ 3. $\iint V$

  ✗ 4. $\oint V$

Question ID : **5038909126**

Status : **Answered**

Chosen Option : **2**

Q.76 Which of the following types of instruments can be used for AC measurements only?

Ans
- ✗ 1. Thermocouple type instruments
- ✗ 2. PMMC instruments
- ✓ 3. Induction type instruments
- ✗ 4. Rectifier type instruments

Question ID : **5038909179**
Status : **Answered**
Chosen Option : **3**

Q.77 Consider the following Bode function:

$G(s)H(s) = \frac{10}{s(s+2)}$ The gain for constructing the Bode plot for the given transfer function is:

Ans
- ✗ 1. 15
- ✗ 2. 20
- ✓ 3. 5
- ✗ 4. 10

Question ID : **5038909176**
Status : **Answered**
Chosen Option : **3**

Q.78 A triangular wave can be generated by:

Ans
- ✗ 1. differentiating a sine wave
- ✗ 2. integrating a sine wave
- ✓ 3. integrating a square wave
- ✗ 4. differentiating a square wave

Question ID : **5038909183**
Status : **Answered**
Chosen Option : **3**

Q.79 The concept of transfer function applies to:

Ans
- ✗ 1. only MIMO systems
- ✗ 2. linear and non-linear systems
- ✗ 3. linear time varying systems only
- ✓ 4. linear time invariant systems only

Question ID : **5038909171**
Status : **Answered**
Chosen Option : **4**

Q.80 A voltage multiplier with a multiplication factor of three is called _____

Ans   ✗ 1. voltage doubler

     ✗ 2. voltage limiter

     ✗ 3. voltage quadrupler

     ✔ 4. voltage tripler

Question ID : **5038909160**
Status : **Answered**
Chosen Option : **2**

Q.81 Which of the following conditions is required to be satisfied if a continuous time signal x(t) is said to be even?

Ans   ✗ 1. $x(t) = -x(2t)$

     ✔ 2. $x(t) = x(-t)$

     ✗ 3. $x(t) = -x(t)$

     ✗ 4. x(t) = x(2t)

Question ID : **5038909132**
Status : **Answered**
Chosen Option : **2**

Q.82 In a signal flow graph, the output node has:

Ans   ✗ 1. at least one incoming branch and multiple outgoing branches

     ✗ 2. one outgoing branch only

     ✗ 3. one outgoing branch and one incoming branch

     ✔ 4. incoming branches but no outgoing branch

Question ID : **5038909172**
Status : **Answered**
Chosen Option : **3**

Q.83 What is the ohms/volt rating of a voltmeter with a 25 µA movement?

Ans   ✗ 1. $400 \ \Omega/V$

     ✗ 2. $4000 \ \Omega/V$

     ✗ 3. $40 \ \Omega/V$

     ✔ 4. $40000 \ \Omega/V$

Question ID : **5038909186**
Status : **Answered**
Chosen Option : **4**

Q.84 Which of the following systems is a time-variant system?

Ans ✗ 1. y(n) = Cos x(n)

✓ 2. $y(n) = x(n^2)$

✗ 3. $y(n) = |x(n)|$

✗ 4. y(n) = x(-n)

Question ID : **5038909138**

Status : **Answered**

Chosen Option : **2**

Q.85 Which of the following is NOT a valid disadvantage of low power factor?

Ans ✗ 1. Large copper losses

✗ 2. Greater conductor size

✓ 3. Smaller KVA rating of equipment

✗ 4. Poor voltage regulation

Question ID : **5038909143**

Status : **Answered**

Chosen Option : **2**