NIC Scientist B S2
(Candidate Response Sheet)

Roll Number	**12201180020**
Name of the Candidate	**SYEED MOHD AMEEN**
Examination Name	**NIC Scientist B S2**
Exam Date & Time	**12-12-2023 03:00:00**

Section : Generic, Q01

Question ID:- 1

Which of the following 7-digit numbers cannot be a perfect square?
I. 45xyz26
II. 2xyz175
III. xyz3310

Options:-

Only I
Option ID :- 1,

Only II and III
Option ID :- 2,

Only III
Option ID :- 3,

All of the above
Option ID :- 4,

Answer Given by Candidate:- Only III **, Option ID : -3**

Correct Answer :- All of the above **Option ID :- 4**

Section : Generic, Q02

Question ID:- 2

If NET 14 and NET 15 are 5-digit numbers such that their sum equals 157229, then N + E + T would be _____.

Options:-

15

- ,

Option ID :- 5,

25

- ,

Option ID :- 6,

21

- ,

Option ID :- 7,

23

- ,

Option ID :- 8,

21

Answer Given by Candidate:- , Option ID : -7

21

Correct Answer : Option ID :- 7

Section : Generic, Q03

Question ID:- 3

In a class of 10 students, 3 failed in history, 6 failed in geography and 2 failed in both. How many students passed in both the subjects?

Options:-

0

- ,

Option ID :- 9,

1

- ,

Option ID :- 10,

2

- ,

Option ID :- 11,

3

- ,

Option ID :- 12,

3

Answer Given by Candidate:- , Option ID : -12

3

Correct Answer : Option ID :- 12

Section : Generic, Q04

Question ID:- 4

Three pipes A, B and C can fill a tank from empty to full in 30 minutes, 20 minutes and 10 minutes respectively. When the tank is empty, all three pipes are opened up to discharge chemical solutions P, Q and R into the tank respectively. What is the proportion of the solution R in the liquid in the tank after 3 minutes?

Options:-

5/11

▪ ,

Option ID :- 13,

7/11

▪ ,

Option ID :- 14,

6/11

▪ ,

Option ID :- 15,

8/11

▪ ,

Option ID :- 16,

6/11

Answer Given by Candidate:- , Option ID : -15

6/11

Correct Answer :- Option ID :- 15

Section : Generic, Q05

Question ID:- 5

For the year 2019, which of the previous year's calendar can be used?

Options:-

2011

▪ ,

Option ID :- 17,

2013

▪ ,

Option ID :- 18,

2012

▪ ,

Option ID :- 19,

2014

- ,

Option ID :- 20,

2012

Answer Given by Candidate:- , Option ID : -19

2013

Correct Answer :- Option ID :- 18

Section : Generic, Q06

Question ID:- 6

Every time a ball fells to ground, it bounces back to half the height it fell from. A ball is dropped from a height of 1024 cm. The maximum height from the ground to which the ball can rise after the tenth bounce is _____

Options:-

2 cm

- ,

Option ID :- 21,

1.5 cm

- ,

Option ID :- 22,

1 cm

- ,

Option ID :- 23,

0.5 cm

- ,

Option ID :- 24,

0.5 cm

Answer Given by Candidate:- , Option ID : -24

1 cm

Correct Answer :- Option ID :- 23

Section : Generic, Q07

Question ID:- 7

Mohan lent Geeta as much money as she already had. She then spent Rs. 10. Next day, he again lent as much money as she already had then. She again spent Rs. 10. On the third day, Mohan again lent as much money to Geeta as she had and she again spent Rs. 10, after which she was left with no money by the end of the third day. How much money did she have initially?

Options:-

Rs. 11.25

- ,

Option ID :- 25,

Rs. 10.75

- ,

Option ID :- 26,

Rs. 8.75

- ,

Option ID :- 27,

Rs. 7.25

- ,

Option ID :- 28,

Answer Given by Candidate:- Rs. 8.75 **, Option ID : -27**

Correct Answer :- Rs. 8.75 **Option ID :- 27**

Section : Generic, Q08

Question ID:- 8

Farida' birthday was on a Monday and was exactly 37 days after Prem's birthday. Julie's birthday was 67 days before Prem's birthday. On what day of the week was Julie's birthday?

Options:-

Sunday

- ,

Option ID :- 29,

Monday

- ,

Option ID :- 30,

Tuesday

- ,

Option ID :- 31,

Wednesday

- ,

Option ID :- 32,

Answer Given by Candidate:- Tuesday **, Option ID : -31**

Tuesday

Correct Answer :- **Option ID :- 31**

Section : Generic, Q09

Question ID:- 9

Nine-eleventh of the members of a parliamentary committee are men. Of the men, 2/3rd are from the Rajya Sabha. Further, 7/11 of the total committee members are from the Rajya Sabha. What fraction of the total number are women from the Lok Sabha?

Options:-

- 1/11 , **Option ID :- 33,**
- 6/11 , **Option ID :- 34,**
- 2/11 , **Option ID :- 35,**
- 3/11 , **Option ID :- 36,**

Answer Given by Candidate:- 2/11 **, Option ID : -35**

Correct Answer :- 1/11 **Option ID :- 33**

Section : Generic, Q10

Question ID:- 10

In how many distinguishable ways, can the letters of the word "CHANCE" be arranged?

Options:-

- 120 , **Option ID :- 37,**
- 240 , **Option ID :- 38,**

360

- , **Option ID :- 39,**

480

- , **Option ID :- 40,**

Answer Given by Candidate:- 120 **, Option ID : -37**

Correct Answer :- 360 **Option ID :- 39**

Section : Generic, Q11

Question ID:- 11

Let m and n be two positive integers such that m + n + mn = 118. Then the value of m + n = ?

Options:-

18

- , **Option ID :- 41,**

22

- , **Option ID :- 42,**

24

- , **Option ID :- 43,**

cannot be determined

- , **Option ID :- 44,**

Answer Given by Candidate:- 24 **, Option ID : -43**

Correct Answer :- 22 **Option ID :- 42**

Section : Generic, Q12

Question ID:- 12

In a sequence of 24 positive integers, the product of any two consecutive integers is 24.
If the 17th member of the sequence is 6, the 7th member is _____.

Options:-

4

- , **Option ID :- 45,**

6

■ ,

Option ID :- 46,

8

■ ,

Option ID :- 47,

1

■ ,

Option ID :- 48,

Answer Given by Candidate:- 8 **, Option ID : -47**

Correct Answer :- 6 **Option ID :- 46**

Section : Generic, Q13

Question ID:- 13

Two solutions X and Y containing ingredients A, B and C in the proportion of a:b:c and c:b:a respectively are mixed to form a new category of solution. For the resultant mixture to have equal proportion of A, B and C, it is necessary that _____.

Options:-

b = (c-a)/2

■ ,

Option ID :- 49,

c = (a+b)/2

■ ,

Option ID :- 50,

c = (a-b)/2

■ ,

Option ID :- 51,

b = (c+a)/2

■ ,

Option ID :- 52,

Answer Given by Candidate:- c = (a-b)/2 **, Option ID : -51**

Correct Answer :- b = (c+a)/2 **Option ID :- 52**

Section : Generic, Q14

Question ID:- 14

A fuel station sold diesel costing Rs. 15000 to 150 persons on a single day. If the lower limit of sale to a person is Rs. 50, what is the maximum amount in rupees for which one person could have purchased diesel on that day?

Options:-

7500

Option ID :- 53,

7650

Option ID :- 54,

7550

Option ID :- 55,

7450

Option ID :- 56,

Answer Given by Candidate:- 7450 **, Option ID : -56**

Correct Answer :- 7550 **Option ID :- 55**

Section : Generic, Q15

Question ID:- 15

In a village, number of unhealthy children is 20% less than the number of healthy children. In the next year, due to flood, number of unhealthy children increases by 45% and again in the next year, it shows improvement by 15%. If in each of these two years, total number of children remains the same, then find the approximate percentage increase in the final number of healthy children over that of in immediate previous year?

Options:-

30%

Option ID :- 57,

32%

Option ID :- 58,

27%

Option ID :- 59,

29%

- ,

Option ID :- 60,

27%

Answer Given by Candidate:- , Option ID : -59

27%

Correct Answer :- Option ID :- 59

Section : Generic, Q16

Question ID:- 16

Age of Sonu 5 years ago is 25% more than the age of Neeraj at that time. 5 years later, their total age is 1300/9% of the sum of the ages updated by them in facebook. Find the ratio of age of Sonu 6 years later to the age of Neeraj one year ago if they updated their original age as 25 years and 20 years respectively.

Options:-

4:3

- ,

Option ID :- 61,

6:5

- ,

Option ID :- 62,

3:2

- ,

Option ID :- 63,

5:3

- ,

Option ID :- 64,

3:2

Answer Given by Candidate:- , Option ID : -63

3:2

Correct Answer :- Option ID :- 63

Section : Generic, Q17

Question ID:- 17

A spherical toy of radius 12cm is melted and re-casted into a number of small cylindrical and conical toys in the ratio of 2:3. Ratio of height of cone to that of the cylinder is 2:3 and the ratio of radius of cone to that of the cylinder is √3:1. Find the difference between number of cylindrical and conical toys if radius and height of cylinder is 4cm and 6cm respectively?

Options:-

6

- ,

Option ID :- 65,

5

- ,

Option ID :- 66,

4

- ,

Option ID :- 67,

3

- ,

Option ID :- 68,

Answer Given by Candidate:- 4 **, Option ID : -67**

Correct Answer :- 6 **Option ID :- 65**

Section : Generic, Q18

Question ID:- 18

The following question is accompanied by two statements. You have to determine which statement(s) is/are sufficient/ necessary to answer the given question:

What is the selling price of an article if the ratio of marked price to that of the cost price of the article is 8:5?

I. On article, first discount of 20% and then discount of 10% is given and difference between these discounts is Rs. 192.

II. Difference between marked price and the cost price of that article is Rs. 600 and the profit percent earned on selling the article is 15.2%.

Options:-

Statement I alone is sufficient to answer the question.

- ,

Option ID :- 69,

Statement II alone is sufficient to answer the question.

- ,

Option ID :- 70,

either statement I or statement II by itself is sufficient to answer the question.

- ,

Option ID :- 71,

both statements taken together are necessary to answer the question.

- ,

Option ID :- 72,

Answer Given by Candidate:-

either statement I or statement II by itself is sufficient to answer the question.

, Option ID : -71

Correct Answer :-

either statement I or statement II by itself is sufficient to answer the question.

Option ID :- 71

Section : Generic, Q19

Question ID:- 19

A boat goes certain distance downstream and then returns 3/4th of the distance upstream. It takes 3/2 of the time in upstream than in downstream. If boat increases its speed by $33\frac{1}{3}\%$ and cover a distance of 60 Kms in downstream and then return upstream in 16 hours, find increased speed of boat?

Options:-

16 km/hr

Option ID :- 73,

14 km/hr

Option ID :- 74,

12 km/hr

Option ID :- 75,

8 km/hr

Option ID :- 76,

Answer Given by Candidate:- 12 km/hr **, Option ID : -75**

Correct Answer :- 8 km/hr **Option ID :- 76**

Section : Generic, Q20

Question ID:- 20

Marked price of article A is 75% of the marked price of article B. Shopkeeper sold article B at 8% more discount than that of A. Shopkeeper made a profit of 20% on selling article B and found that its cost price is equal to the selling price of article A. If two successive discounts of 20% and 32.5% are given, then article A is sold at a price of Rs. 972. Find the marked price of article B?

Options:-

Rs. 2400
- ,

Option ID :- 77,

Rs. 2500
- ,

Option ID :- 78,

Rs. 3000
- ,

Option ID :- 79,

Rs. 4000
- ,

Option ID :- 80,

Answer Given by Candidate:- Rs. 3000 **, Option ID : -79**

Correct Answer :- Rs. 2400 **Option ID :- 77**

Section : Generic, Q21

Question ID:- 21

Find the wrong number in the given series: 4, 5, 10, 34, 94, 214, 424.

Options:-

4
- ,

Option ID :- 81,

214
- ,

Option ID :- 82,

34
- ,

Option ID :- 83,

5
- ,

Option ID :- 84,

Answer Given by Candidate:- 34 **, Option ID : -83**

Correct Answer :- 5 **Option ID :- 84**

Section : Generic, Q22

Question ID:- 22

The following question is based on quantities. You have to calculate both the quantities based on the information provided and then compare the quantities. Mark your answer based on the value of the quantities determined.

Quantity I: Aman invested Rs. 1,00,000 at the rate of 16% p.a. The interest was compound half yearly during the first year and annually in the second and third year. What will be the total interest received by the end of 3 years?

Quantity II: the simple interest received on a sum of Rs. 2,30,000 at the rate of 23% p.a during N years is Rs. 4,23,200. Find the compound interest received on the same sum in N/4 years at the rate of 11% p.a. compounded annually?

Options:-

Quantity I < Quantity II

■ ,

Option ID :- 85,

Quantity I > Quantity II

■ ,

Option ID :- 86,

Quantity I ≤ Quantity II

■ ,

Option ID :- 87,

Quantity I ≥ Quantity II

■ ,

Option ID :- 88,

Quantity I ≤ Quantity II

Answer Given by Candidate:- , Option ID : -87

Quantity I > Quantity II

Correct Answer :- Option ID :- 86

Section : Generic, Q23

Question ID:- 23

Ratio of marked price to cost price of the article is 7:5. If the discount percent given is increased from 7.5% to 20%, the profit decrease by Rs.1750. Find the profit when successive discounts of 12% and 15% are given?

Options:-

462

■ ,

Option ID :- 89,

472

■ ,

Option ID :- 90,

482

Option ID :- 91,

492

Option ID :- 92,

Answer Given by Candidate:- 472 **, Option ID : -90**

Correct Answer :- 472 **Option ID :- 90**

Section : Generic, Q24

Question ID:- 24

Three pipes A, B and C can fill a tank in 40 minutes, 60 minutes and 100 minutes respectively. If pipe A is opened first, pipe B after 10 minutes and pipe C after another 5 minutes, in how many more minutes will the tank be filled?

Options:-

383/37 min

Option ID :- 93,

370/29 min

Option ID :- 94,

325/31 min

Option ID :- 95,

None of these

Option ID :- 96,

Answer Given by Candidate:- 325/31 min **, Option ID : -95**

Correct Answer :- 325/31 min **Option ID :- 95**

Section : Generic, Q25

Question ID:- 25

In vessel A, mixture of petrol and kerosene is in the ratio of 7:5. In vessel B, mixture of petrol and kerosene is in the ratio of 8:5. P litres of mixture from vessel A and Q litres of mixture from B are taken out and poured into vessel C. If vessel C contains 150 litres of total mixture with 40% kerosene, then find the value of P/Q?

Options:-

12/19

- ,

Option ID :- 97,

12/13

- ,

Option ID :- 98,

12/17

- ,

Option ID :- 99,

11/13

- ,

Option ID :- 100,

Answer Given by Candidate:- 12/17 **, Option ID : -99**

Correct Answer :- 12/13 **Option ID :- 98**

Section : Generic, Q26

Question ID:- 26

Read the following instructions carefully and answer the given questions below.
There are five friends A, B, C, D and E who work in different posts in the same office. They spend their salary only on food and rent. The money spent on food by A is equal to money spent by B on rent. The ratio of money spent on food and rent by C and E is in the ratio of 3:5 and 2:3 respectively. The money spent on rent by A, C and D are in the ratio of 3:2:1 and the ratio of money spent on food by B and D is 3:7. The ratio of salary of A, B, D and E is 11:8:9:10 and the salary of E is 50,000 out of 222000.

Find the ratio of salary of C and A together and salary of B and D together.

Options:-

87:85

- ,

Option ID :- 101,

85:73

- ,

Option ID :- 102,

85:87

- ,

Option ID :- 103,

23:31

- ,

Option ID :- 104,

Answer Given by Candidate:- 87:85 **, Option ID : -101**

87:85

Correct Answer :- **Option ID :- 101**

Section : Generic, Q27

Question ID:- 27

Read the following instructions carefully and answer the given questions below.
There are five friends A, B, C, D and E who work in different posts in the same office. They spend their salary only on food and rent. The money spent on food by A is equal to money spent by B on rent. The ratio of money spent on food and rent by C and E is in the ratio of 3:5 and 2:3 respectively. The money spent on rent by A, C and D are in the ratio of 3:2:1 and the ratio of money spent on food by B and D is 3:7. The ratio of salary of A, B, D and E is 11:8:9:10 and the salary of E is 50,000 out of 222000.

The amount spent on rent by C is what percent of amount spent by D on rent?

Options:-

200%
- , **Option ID :- 105,**

220%
- , **Option ID :- 106,**

110%
- , **Option ID :- 107,**

155%
- , **Option ID :- 108,**

Answer Given by Candidate:- 200% **, Option ID : -105**

Correct Answer :- 200% **Option ID :- 105**

Section : Generic, Q28

Question ID:- 28

Read the following instructions carefully and answer the given questions below.
There are five friends A, B, C, D and E who work in different posts in the same office. They spend their salary only on food and rent. The money spent on food by A is equal to money spent by B on rent. The ratio of money spent on food and rent by C and E is in the ratio of 3:5 and 2:3 respectively. The money spent on rent by A, C and D are in the ratio of 3:2:1 and the ratio of money spent on food by B and D is 3:7. The ratio of salary of A, B, D and E is 11:8:9:10 and the salary of E is 50,000 out of 222000.

The sum of money spent on food by A, B and C is how much more than sum of money spent on rent by D and E?

Options:-

10000

Option ID :- 109,

11000

Option ID :- 110,

12000

Option ID :- 111,

11500

Option ID :- 112,

Answer Given by Candidate:- 12000 **, Option ID : -111**

Correct Answer :- 12000 **Option ID :- 111**

Section : Generic, Q29

Question ID:- 29

Read the following instructions carefully and answer the given questions below.
There are five friends A, B, C, D and E who work in different posts in the same office. They spend their salary only on food and rent. The money spent on food by A is equal to money spent by B on rent. The ratio of money spent on food and rent by C and E is in the ratio of 3:5 and 2:3 respectively. The money spent on rent by A, C and D are in the ratio of 3:2:1 and the ratio of money spent on food by B and D is 3:7. The ratio of salary of A, B, D and E is 11:8:9:10 and the salary of E is 50,000 out of 222000.

Find the difference between average salary of B and C together and D and E together.

Options:-

21230

Option ID :- 113,

23456

Option ID :- 114,

12345

Option ID :- 115,

11500

Option ID :- 116,

Answer Given by Candidate:- 11500 **, Option ID : -116**

11500

Correct Answer :- **Option ID :- 116**

Section : Generic, Q30

Question ID:- 30

If it is possible to make a meaningful word from the first, second, fifth and sixth letter of the word "Indigenes", then which will be the second letter of the word from the left end? If no such word can be formed, mark the answer as Y. If more than one word can be formed, mark the answer as X.

Options:-

Y

- , **Option ID :- 117,**

X

- , **Option ID :- 118,**

E

- , **Option ID :- 119,**

I

- , **Option ID :- 120,**

E

Answer Given by Candidate:- , Option ID : -119

Y

Correct Answer :- Option ID :- 117

Section : Generic, Q31

Question ID:- 31

In each of the questions below, some statements are given followed by two conclusions. You have to take the given statements to be true even if they seem to be at variance with commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

Statements: Some America is USA. All England is Europe. No England is America.
Conclusions:
I. Some USA is Europe
II. No USA is Europe

Options:-

If only conclusion I follows.

- , **Option ID :- 121,**

If only conclusion II follows.

■ ,

Option ID :- 122,

If either conclusion I or II follows.

■ ,

Option ID :- 123,

If neither conclusion I or II follows.

■ ,

Option ID :- 124,

If either conclusion I or II follows.

Answer Given by Candidate:- , Option ID : -123

If either conclusion I or II follows.

Correct Answer :- Option ID :- 123

Section : Generic, Q32

Question ID:- 32

In each of the questions below, some statements are given followed by two conclusions. You have to take the given statements to be true even if they seem to be at variance with commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

Statements: All assistant is clerk. Some clerk is PO. All PO is manager.
Conclusions:
I. Some clerk is manager.
II. All clerk is manager.

Options:-

If only conclusion I follows.

■ ,

Option ID :- 125,

If only conclusion II follows.

■ ,

Option ID :- 126,

If either conclusion I or II follows.

■ ,

Option ID :- 127,

If both conclusion I and II follows.

■ ,

Option ID :- 128,

If either conclusion I or II follows.

Answer Given by Candidate:- , Option ID : -127

If only conclusion I follows.

Correct Answer :- Option ID :- 125

Section : Generic, Q33

Question ID:- 33

Read the following information carefully and answer the questions given below.

A three-generation family consists of nine members i.e., W, B, Z, K, A, N, Q, D and P. There are two married couples. N is the daughter of B. Q is the mother-in-law of B. D has only three children. P is the grandmother of N. W is sister of B. Siblings of K are unmarried. N is the niece of Z who is the brother-in-law of B. A is the maternal aunt of N. P has only two children. K is the mother of N. D has only one son.

What is the relation of W with respect to K?

Options:-

Maternal Aunt

Option ID :- 129,

Brother

Option ID :- 130,

Paternal Aunt

Option ID :- 131,

Sister-in-law

Option ID :- 132,

Answer Given by Candidate:- Paternal Aunt **, Option ID : -131**

Correct Answer :- Sister-in-law **Option ID :- 132**

Section : Generic, Q34

Question ID:- 34

A three-generation family consists of nine members i.e., W, B, Z, K, A, N, Q, D and P. There are two married couples. N is the daughter of B. Q is the mother-in-law of B. D has only three children. P is the grandmother of N. W is sister of B. Siblings of K are unmarried. N is the niece of Z who is the brother-in-law of B. A is the maternal aunt of N. P has only two children. K is the mother of N. D has only one son.

Who among the following is/are the children of D?

I. The one who is the wife of B.
II. A who is the sister of Z.
III. Z who is the son of Q.

Options:-

Only I and II

Option ID :- 133,

Only III

Option ID :- 134,

- Only II ,

Option ID :- 135,

- All of the above ,

Option ID :- 136,

Answer Given by Candidate:- Only II **, Option ID : -135**

Correct Answer :- All of the above **Option ID :- 136**

Section : Generic, Q35

Question ID:- 35

Study the following information carefully and answer the question which follows:

'M + K' means 'M is brother of K'

'M ÷ K' means 'M is father of K'

'M × K' means 'M is wife of K'

'M – K' means 'M is sister of K'

'M = K' means 'M is mother of K'

Which of the following expression represents the relationship "D is daughter-in-law of C"?

Options:-

- D X H + N = E ÷ C ,

Option ID :- 137,

- H + D X N ÷ E = C ,

Option ID :- 138,

- C = F + L – Z X D ,

Option ID :- 139,

- None of the above ,

Option ID :- 140,

Answer Given by Candidate:- C = F + L – Z X D **, Option ID : -139**

Correct Answer :- None of the above **Option ID :- 140**

Section : Generic, Q36

Question ID:- 36

Study the following arrangement carefully and answer the questions.

2 W U 5 O 1 R T V 4 H 1 0 J P G 3 8 M 7 B Q 6 I Y 9 L X 2 A C

How many such vowels are there in the arrangement, each of which is preceded by a number and immediately followed by a consonant?

Options:-

One

Option ID :- 141,

Two

Option ID :- 142,

More than two

Option ID :- 143,

None of the above

Option ID :- 144,

Answer Given by Candidate:- Two **, Option ID : -142**

Correct Answer :- Two **Option ID :- 142**

Section : Generic, Q37

Question ID:- 37

Study the following arrangement carefully and answer the questions.

2 W U 5 O 1 R T V 4 H 1 0 J P G 3 8 M 7 B Q 6 I Y 9 L X 2 A C

How many such numbers are there in the arrangement, each of which is immediately preceded by a consonant but not immediately followed by a consonant?

Options:-

One

Option ID :- 145,

Three

Option ID :- 146,

Four

Option ID :- 147,

None of the above

- ,

Option ID :- 148,

Three

Answer Given by Candidate:- , Option ID : -146

Four

Correct Answer :- Option ID :- 147

Section : Generic, Q38

Question ID:- 38

Study the following information carefully and answer the question given below:

Point A is 8m north of point B. Point E is 5m south of point F. Point E is 10m east of point D which is 12m south of point C. Point G is 14m north of point H. Point C is 20m west of point B. Point G is 24m east of point F.

What is the shortest distance between point B and point F?

Options:-

$8\sqrt{2}$ m

- ,

Option ID :- 149,

$\sqrt{149}$ m

- ,

Option ID :- 150,

$\sqrt{135}$ m

- ,

Option ID :- 151,

None of the above

- ,

Option ID :- 152,

$\sqrt{135}$ m

Answer Given by Candidate:- , Option ID : -151

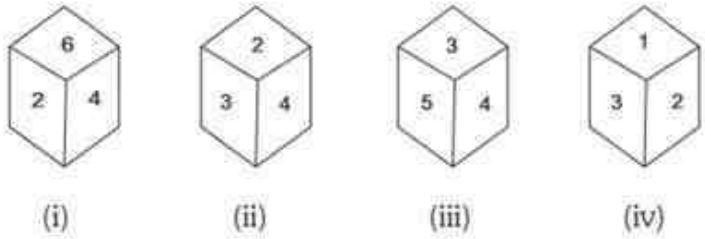
$\sqrt{149}$ m

Correct Answer :- Option ID :- 150

Section : Generic, Q39

Question ID:- 39

A dice is thrown four times and its four different positions are shown below.
Find the number on the face opposite the face showing 2.



(i) (ii) (iii) (iv)

Options:-

- 3 ,

Option ID :- 153,

- 4 ,

Option ID :- 154,

- 5 ,

Option ID :- 155,

- 6 ,

Option ID :- 156,

Answer Given by Candidate:- 5 **, Option ID : -155**

Correct Answer :- 5 **Option ID :- 155**

Section : Generic, Q40

Question ID:- 40

Study the following information carefully and answer the questions given below.

Some people are sitting in two parallel rows facing each other. A, B, C, D, E, F and G are sitting in row 1 facing north and P, Q, R, S, T, U and V are sitting in row 2 facing south (not necessarily in the same order).
Three persons sit between B and C and one of them sits at an end. Q sits fourth to the right of T. P sits to the immediate left of U who sits at the middle of the row. A is not a neighbor of B. E sits to the immediate right of the one who faces P. D faces the one who sits second to the left of V. S faces G. R faces the one who sits to the immediate right of A. T does not sit at any end.

Who among the following sits second to the left of the one who is facing T?

Options:-

- F ,

Option ID :- 157,

E

■ ,

Option ID :- 158,

C

■ ,

Option ID :- 159,

A

■ ,

Option ID :- 160,

C

Answer Given by Candidate:- , Option ID : -159

F

Correct Answer :- Option ID :- 157

Section : Generic, Q41

Question ID:- 41

Study the following information carefully and answer the questions given below.

Some people are sitting in two parallel rows facing each other. A, B, C, D, E, F and G are sitting in row 1 facing north and P, Q, R, S, T, U and V are sitting in row 2 facing south (not necessarily in the same order).
Three persons sit between B and C and one of them sits at an end. Q sits fourth to the right of T. P sits to the immediate left of U who sits at the middle of the row. A is not a neighbor of B. E sits to the immediate right of the one who faces P. D faces the one who sits second to the left of V. S faces G. R faces the one who sits to the immediate right of A. T does not sit at any end.

How many persons sit between C and the one who faces P?

Options:-

one

■ ,

Option ID :- 161,

two

■ ,

Option ID :- 162,

three

■ ,

Option ID :- 163,

more than three

■ ,

Option ID :- 164,

three

Answer Given by Candidate:- , Option ID : -163

three

Correct Answer :- Option ID :- 163

Section : Generic, Q42

Question ID:- 42

Study the following information carefully and answer the questions given below.

Some people are sitting in two parallel rows facing each other. A, B, C, D, E, F and G are sitting in row 1 facing north and P, Q, R, S, T, U and V are sitting in row 2 facing south (not necessarily in the same order).
Three persons sit between B and C and one of them sits at an end. Q sits fourth to the right of T. P sits to the immediate left of U who sits at the middle of the row. A is not a neighbor of B. E sits to the immediate right of the one who faces P. D faces the one who sits second to the left of V. S faces G. R faces the one who sits to the immediate right of A. T does not sit at any end.

Who among the following faces the person who sits diagonally opposite to S?

Options:-

C

Option ID :- 165,

V

Option ID :- 166,

Q

Option ID :- 167,

T

Option ID :- 168,

Answer Given by Candidate:- Q, Option ID : -167

Correct Answer :- V Option ID :- 166

Section : Technical, Q43

Question ID:- 43

Three numbers are chosen at random from number 1 to 30. The probability that the minimum of the chosen number is 9 and maximum is 25 is:

Options:-

$\frac{1}{406}$

Option ID :- 169,

$\frac{1}{812}$

- , **Option ID :- 170,**

$\frac{3}{812}$

- , **Option ID :- 171,**

none of these

- , **Option ID :- 172,**

Answer Given by Candidate:- $\frac{1}{812}$ **, Option ID : -170**

Correct Answer :- $\frac{3}{812}$ **Option ID :- 171**

Section : Technical, Q44

Question ID:- 44

In a single throw of two dice, the probability of getting a doublet of odd number is:

Options:-

$\frac{1}{6}$

- , **Option ID :- 173,**

$\frac{1}{12}$

- , **Option ID :- 174,**

$\frac{5}{12}$

- , **Option ID :- 175,**

$\frac{1}{2}$

- , **Option ID :- 176,**

Answer Given by Candidate:- $\frac{1}{12}$ **, Option ID : -174**

$\frac{1}{12}$

Correct Answer :- **Option ID :- 174**

Section : Technical, Q45

Question ID:- 45

Which of the following is not a measure of central tendency?

Options:-

- Standard deviation , **Option ID :- 177,**
- mean , **Option ID :- 178,**
- Median , **Option ID :- 179,**
- Mode , **Option ID :- 180,**

Answer Given by Candidate:- mean **, Option ID : -178**

Correct Answer :- Standard deviation **Option ID :- 177**

Section : Technical, Q46

Question ID:- 46

A coin is tossed twice. The probability of getting exactly two heads is:

Options:-

- 0.50 , **Option ID :- 181,**
- 0.75 , **Option ID :- 182,**
- 0.60 , **Option ID :- 183,**
- 0.25 , **Option ID :- 184,**

0.75
Answer Given by Candidate:- , **Option ID : -182**

0.25
Correct Answer :- **Option ID :- 184**

Section : Technical, Q47

Question ID:- 47

How many different rearrangements are there of the letters in the word BUBBLE?

Options:-

36
- , **Option ID :- 185,**

48
- , **Option ID :- 186,**

70
- , **Option ID :- 187,**

120
- , **Option ID :- 188,**

120
Answer Given by Candidate:- , **Option ID : -188**

120
Correct Answer :- **Option ID :- 188**

Section : Technical, Q48

Question ID:- 48

How many different rearrangements are there of the letters in the word TATARS if the two A's are never adjacent?

Options:-

24
- , **Option ID :- 189,**

120
- , **Option ID :- 190,**

144

- ,

Option ID :- 191,

180

- ,

Option ID :- 192,

Answer Given by Candidate:- 120 **, Option ID : -190**

Correct Answer :- 120 **Option ID :- 190**

Section : Technical, Q49

Question ID:- 49

If random variable is uniformly distributed in (-2, 3) then its variance is:

Options:-

$\frac{1}{12}$

- ,

Option ID :- 193,

$\frac{25}{12}$

- ,

Option ID :- 194,

$\frac{1}{144}$

- ,

Option ID :- 195,

$\frac{17}{12}$

- ,

Option ID :- 196,

Answer Given by Candidate:- $\frac{25}{12}$ **, Option ID : -194**

Correct Answer :- $\frac{25}{12}$ **Option ID :- 194**

Section : Technical, Q50

Question ID:- 50

A variable X is exponentially distributed for $x \geq 0$ with mean 1. $P(1 \leq X \leq 2) =$

Options:-

- $e^{-2} - e^{-1}$,
Option ID :- 197,
- $e^{-1} - e^{-2}$,
Option ID :- 198,
- $e(e-1)$,
Option ID :- 199,
- $e(1-e)$,
Option ID :- 200,

Answer Given by Candidate:- $e^{-1} - e^{-2}$ **, Option ID : -198**

Correct Answer :- $e^{-1} - e^{-2}$ **Option ID :- 198**

Section : Technical, Q51

Question ID:- 51

If X is a Poisson random variable and $3.P(X=1) = 2.P(X=2)$, the variance of X is:

Options:-

- $\frac{1}{3}$,
Option ID :- 201,
- 3 ,
Option ID :- 202,
- $\sqrt{3}$,
Option ID :- 203,

$\frac{1}{\sqrt{3}}$

- , **Option ID :- 204,**

3

Answer Given by Candidate:- , Option ID : -202

3

Correct Answer :- Option ID :- 202

Section : Technical, Q52

Question ID:- 52

If $G(t)$ is the generation function of the sequence a_r, then the generation function of a_{r+2} is given by:

Options:-

$G(t)$

- , **Option ID :- 205,**

$t(t-1)G(t)$

- , **Option ID :- 206,**

$\frac{G(t)-a_0-a_1t}{t}$

- , **Option ID :- 207,**

$\frac{G(t)-a_0-a_1t}{t^2}$

- , **Option ID :- 208,**

$t(t-1)G(t)$

Answer Given by Candidate:- , Option ID : -206

$\frac{G(t)-a_0-a_1t}{t^2}$

Correct Answer :- Option ID :- 208

Section : Technical, Q53

Question ID:- 53

Which number representation is typically used for floating-point arithmetic in most modern computers?

Options:-

- Binary-coded decimal (BCD) ,
Option ID :- 209,
- Two's complement ,
Option ID :- 210,
- Excess-3 ,
Option ID :- 211,
- IEEE 754 ,
Option ID :- 212,

Answer Given by Candidate:- IEEE 754 **, Option ID : -212**

Correct Answer :- IEEE 754 **Option ID :- 212**

Section : Technical, Q54

Question ID:- 54

Given the minterm expression:
$W(A, B, C, D) = \Sigma (1, 3, 4, 6, 9, 11, 12, 14)$

Where, 3, 6, 9, 14 are don't care terms. Among the following which is the correct minimal sum-of-products form for W?

Options:-

- $B'D + BC'D'$,
Option ID :- 213,
- $B'D + BD'$,
Option ID :- 214,
- $BC'D' + A'B'D + AB'D + BCD'$,
Option ID :- 215,
- $B'D' + BD$,
Option ID :- 216,

Answer Given by Candidate:- $B'D + BD'$ **, Option ID : -214**

Correct Answer :- $B'D + BD'$ **Option ID :- 214**

Section : Technical, Q55

Question ID:- 55

Which of the following circuits is used for arithmetic operations on two n-bit binary numbers?

Options:-

Decoder

Option ID :- 217,

Multiplexer

Option ID :- 218,

Full adder

Option ID :- 219,

D flip-flop

Option ID :- 220,

Answer Given by Candidate:- Full adder **, Option ID : -219**

Correct Answer :- Full adder **Option ID :- 219**

Section : Technical, Q56

Question ID:- 56

Which addressing mode allows the instruction to access memory locations based on the sum of a base register and an offset value?

Options:-

Indexed addressing

Option ID :- 221,

Indirect addressing

Option ID :- 222,

Base addressing

Option ID :- 223,

Relative addressing

Option ID :- 224,

Answer Given by Candidate:- Indexed addressing **, Option ID : -221**

Indexed addressing

Correct Answer :- **Option ID :- 221**

Section : Technical, Q57

Question ID:- 57

How many flip-flops are needed for MOD-16 ring counter and MOD-16 Johnson counter?

Options:-

- 16, 16 ,
Option ID :- 225,
- 16, 8 ,
Option ID :- 226,
- 4, 3 ,
Option ID :- 227,
- 4, 4 ,
Option ID :- 228,

Answer Given by Candidate:- 16, 8 **, Option ID : -226**

Correct Answer :- 16, 8 **Option ID :- 226**

Section : Technical, Q58

Question ID:- 58

Given, a 2 way set associative cache memory, which consists four blocks. For choosing the block to be replaced, use the least recently used (LRU) scheme. Which of the following is the number of cache misses, if the sequence of block addresses is given as 4, 8, 0, 8, 4.

Options:-

- 2 ,
Option ID :- 229,
- 1 ,
Option ID :- 230,
- 3 ,
Option ID :- 231,
- 4 ,
Option ID :- 232,

Answer Given by Candidate:- 3 **, Option ID : -231**

Correct Answer :- 4 **Option ID :- 232**

Section : Technical, Q59

Question ID:- 59

Which memory interface technique allows the CPU to access memory using a fixed-size block of data, regardless of the requested data size?

Options:-

- Burst mode , **Option ID :- 233,**
- Page mode , **Option ID :- 234,**
- Pipelined mode , **Option ID :- 235,**
- Synchronous mode , **Option ID :- 236,**

Answer Given by Candidate:- Page mode **, Option ID : -234**

Correct Answer :- Burst mode **Option ID :- 233**

Section : Technical, Q60

Question ID:- 60

Which technique is used in instruction pipelining to improve branch prediction accuracy and reduce pipeline stalls?

Options:-

- Operand forwarding , **Option ID :- 237,**
- Data caching , **Option ID :- 238,**
- Register renaming , **Option ID :- 239,**

Branch target prediction

- ,

Option ID :- 240,

Operand forwarding

Answer Given by Candidate:- , Option ID : -237

Branch target prediction

Correct Answer :- Option ID :- 240

Section : Technical, Q61

Question ID:- 61

Which of the following techniques is used to estimate the power spectrum of a signal?

Options:-

Autocorrelation

- ,

Option ID :- 241,

Power spectral density

- ,

Option ID :- 242,

Amplitude modulation

- ,

Option ID :- 243,

Angle modulation

- ,

Option ID :- 244,

Power spectral density

Answer Given by Candidate:- , Option ID : -242

Power spectral density

Correct Answer :- Option ID :- 242

Section : Technical, Q62

Question ID:- 62

A source has 256 symbols which are equiprobable and their successive transmissions are independent. If an AWGN (Additive White Gaussian Noise) channel having a bandwidth of 4 kHz and SNR of 31 is used for transmission of symbols, the maximum rate (in symbols/s) at which the transmission can made with an arbitrary low probability of error is _____.

Options:-

2500

- ,

Option ID :- 245,

- 1500 ,

Option ID :- 246,

- 2000 ,

Option ID :- 247,

- 1000 ,

Option ID :- 248,

Answer Given by Candidate:- 1500 **, Option ID : -246**

Correct Answer :- 2500 **Option ID :- 245**

Section : Technical, Q63

Question ID:- 63

Which decoding technique is used in digital communications to find the most likely transmitted sequence of symbols?

Options:-

- MAP decoding ,

Option ID :- 249,

- ML decoding ,

Option ID :- 250,

- PCM decoding ,

Option ID :- 251,

- DPCM decoding ,

Option ID :- 252,

Answer Given by Candidate:- ML decoding **, Option ID : -250**

Correct Answer :- ML decoding **Option ID :- 250**

Section : Technical, Q64

Question ID:- 64

In an AM wave represented by,
$V(t) = 5[1+0.2\ X(t)]\ \text{Cos}\omega t$
Where, X(t) is represented by density function UDF[-2, 2].
What will be the power efficiency of the above AM wave?

Options:-

- 4.45% ,

Option ID :- 253,

- 7.20% ,

Option ID :- 254,

- 6.25% ,

Option ID :- 255,

- 5.07% ,

Option ID :- 256,

Answer Given by Candidate:- 7.20% **, Option ID : -254**

Correct Answer :- 5.07% **Option ID :- 256**

Section : Technical, Q65

Question ID:- 65

Consider a linear block code with a minimum hamming distance of d_{min}=4. It can

Options:-

- Detect upto 3-bits errors and correct upto 1-bit error. ,

Option ID :- 257,

- Detect upto 4-bits errors and correct upto 1-bit error. ,

Option ID :- 258,

- Detect upto 2-bits errors and correct upto 2-bit error. ,

Option ID :- 259,

- Detect upto 2-bits errors and correct upto 1-bit error. ,

Option ID :- 260,

Answer Given by Candidate:- Detect upto 4-bits errors and correct upto 1-bit error. **, Option ID : -258**

Correct Answer :- Detect upto 2-bits errors and correct upto 1-bit error. **Option ID :- 260**

Section : Technical, Q66

Question ID:- 66

Calculate the local oscillator frequency and image frequency in a superheterodyne receiver, if the intermediate frequency is 370 kHz and the signal frequency is 1250 kHz, respectively.

Options:-

- 1450 kHz and 100 kHz ,
Option ID :- 261,
- 1620 kHz and 1990 kHz ,
Option ID :- 262,
- 1450 kHz and 1900 kHz ,
Option ID :- 263,
- 1620 kHz and 100 kHz ,
Option ID :- 264,

Answer Given by Candidate:- 1620 kHz and 1990 kHz **, Option ID : -262**

Correct Answer :- 1620 kHz and 1990 kHz **Option ID :- 262**

Section : Technical, Q67

Question ID:- 67

MSK being an orthogonal scheme, its error probability is given by _____.

Options:-

- $P_b = Q\sqrt{Eb/\ 2N}$,
Option ID :- 265,
- $P_b = 2Q\sqrt{Eb/N}$,
Option ID :- 266,
- $P_b = Q\sqrt{Eb/N}$,
Option ID :- 267,
- $P_b = \frac{Q}{2}\sqrt{\frac{Eb}{2N}}$,
Option ID :- 268,

$$P_b = 2Q\sqrt{Eb/N}$$

Answer Given by Candidate:- , **Option ID : -266**

$$P_b = Q\sqrt{Eb/N}$$

Correct Answer :- **Option ID :- 267**

Section : Technical, Q68

Question ID:- 68

What is the output of the following Python code?

```
def outer_func(x):
def inner_func(y):
 return x + y
 return inner_func

closure = outer_func(10)
result = closure(5)
print(result)
```

Options:-

- 10 , **Option ID :- 269,**
- 5 , **Option ID :- 270,**
- 15 , **Option ID :- 271,**
- 20 , **Option ID :- 272,**

Answer Given by Candidate:- 15 , **Option ID : -271**

Correct Answer :- 15 **Option ID :- 271**

Section : Technical, Q69

Question ID:- 69

The preorder and inorder of a Binary tree are given as follows:

Preorder: 1 2 4 5 3 6 7
Inorder: 4 2 5 1 6 3 7

Which of the following is the post-order traversal of the binary tree constructed from the above mentioned inorder and preorder traversals?

Options:-

- 4 2 5 6 3 7 1 ,

Option ID :- 273,

- 4 5 6 7 2 3 1 ,

Option ID :- 274,

- 4 5 2 1 6 3 7 ,

Option ID :- 275,

- 4 5 2 6 7 3 1 ,

Option ID :- 276,

Answer Given by Candidate:- 4 5 2 6 7 3 1 **, Option ID : -276**

Correct Answer :- 4 5 2 6 7 3 1 **Option ID :- 276**

Section : Technical, Q70

Question ID:- 70

What is the time complexity of searching an element in a balanced binary search tree (BST) of size n?

Options:-

- O(n) ,

Option ID :- 277,

- O(log n) ,

Option ID :- 278,

- O(n log n) ,

Option ID :- 279,

- O(1) ,

Option ID :- 280,

Answer Given by Candidate:- O(log n) **, Option ID : -278**

Correct Answer :- O(log n) **Option ID :- 278**

Section : Technical, Q71

Question ID:- 71

Which of the following data structures provides constant time complexity for both insertion and deletion operations from both ends?

Options:-

- Array ,

Option ID :- 281,

- Stack ,

Option ID :- 282,

- Queue ,

Option ID :- 283,

- Linked List ,

Option ID :- 284,

Answer Given by Candidate:- Queue **, Option ID : -283**

Correct Answer :- Linked List **Option ID :- 284**

Section : Technical, Q72

Question ID:- 72

Which of the following best describes the concept of polymorphism in object-oriented programming?

Options:-

- The ability to define multiple methods with the same name but different implementations in a single class. ,

Option ID :- 285,

- The ability of an object to take on multiple forms and behave differently based on the context. ,

Option ID :- 286,

- The process of hiding the internal implementation details of a class and exposing only the necessary information. ,

Option ID :- 287,

- The practice of creating objects based on a blueprint and defining their common behavior and attributes. ,

Option ID :- 288,

Answer Given by Candidate:-

The ability of an object to take on multiple forms and behave differently based on the context.

, Option ID : -286

Correct Answer :-

The ability of an object to take on multiple forms and behave differently based on the context.

Option ID :- 286

Section : Technical, Q73

Question ID:- 73

What is the solution of the given recurrence relation?
$T(n) = T(n/2) + n\log n$

Options:-

- $O(2^n)$, **Option ID :- 289,**
- $O(n/2)$, **Option ID :- 290,**
- $O(\log n \log \log n)$, **Option ID :- 291,**
- $O(n\log n)$, **Option ID :- 292,**

Answer Given by Candidate:- $O(n/2)$ **, Option ID : -290**

Correct Answer :- $O(n\log n)$ **Option ID :- 292**

Section : Technical, Q74

Question ID:- 74

Which of the following algorithms can solve the Traveling Salesman Problem (TSP) optimally for any given input?

Options:-

- Brute-force algorithm , **Option ID :- 293,**
- Dijkstra's algorithm , **Option ID :- 294,**
- Prim's algorithm , **Option ID :- 295,**

Simulated Annealing algorithm

- ,

Option ID :- 296,

Dijkstra's algorithm

Answer Given by Candidate:- , Option ID : -294

Brute-force algorithm

Correct Answer :- Option ID :- 293

Section : Technical, Q75

Question ID:- 75

Which of the following sorting algorithms has a time complexity of Q(n log n) in the worst case?

Options:-

Bubble sort

- ,

Option ID :- 297,

Insertion sort

- ,

Option ID :- 298,

Quick sort

- ,

Option ID :- 299,

Selection sort

- ,

Option ID :- 300,

Selection sort

Answer Given by Candidate:- , Option ID : -300

Quick sort

Correct Answer :- Option ID :- 299

Section : Technical, Q76

Question ID:- 76

Let A is a P-problem and B is a NP-Problem and L = A∩B then which of the following is possibly true?

Options:-

L is in P but not in NP

- ,

Option ID :- 301,

L is not decidable

- ,

Option ID :- 302,

L is in NP but may not be in P

- ,

Option ID :- 303,

L is always in P

- ,

Option ID :- 304,

Answer Given by Candidate:- L is not decidable **, Option ID : -302**

Correct Answer :- L is in NP but may not be in P **Option ID :- 303**

Section : Technical, Q77

Question ID:- 77

Given following C function

```
int procedure (int x)
{   int b=0;
    for (int i=1;i<x;++i)
    {   int a=0;
        for (int j=x;j>1;j=j/2)
        a=a+1;
        for (int k=1;k<a;k=k*2)
        b=b+1;
    } return b;
}
```

What is the complexity of the given function?

Options:-

x log x

- ,

Option ID :- 305,

xlog(logx)

- ,

Option ID :- 306,

x^3

- ,

Option ID :- 307,

$x(\log x)^2$

- ,

Option ID :- 308,

Answer Given by Candidate:- x log x **, Option ID : -305**

Correct Answer :- xlog(logx) **Option ID :- 306**

Section : Technical, Q78

Question ID:- 78

Consider the objects of weights 5, 3, 1, 2, 4 and values 20, 25, 25, 35 and 40 respectively. The capacity of knapsack is 6 kg. For the given scenario, the maximum profit computed using fractional knapsack is X, whereas consider it as Y, if 0/1 knapsack approach is used. The value of X+Y will be _____.

Options:-

- 160 , **Option ID :- 309,**
- 180 , **Option ID :- 310,**
- 175 , **Option ID :- 311,**
- 200 , **Option ID :- 312,**

Answer Given by Candidate:- 180 **, Option ID : -310**

Correct Answer :- 175 **Option ID :- 311**

Section : Technical, Q79

Question ID:- 79

What is the time complexity of the binary search algorithm in the worst case?

Options:-

- O(n) , **Option ID :- 313,**
- O(n log n) , **Option ID :- 314,**
- O(log n) , **Option ID :- 315,**
- O(n^2) , **Option ID :- 316,**

Answer Given by Candidate:- O(n) **, Option ID : -313**

Correct Answer :- O(log n) **Option ID :- 315**

Section : Technical, Q80

Question ID:- 80

Match the following data and choose the correct option:

Table I	Table II
1. Hamiltonian Circuit	a. Depth First Search
2. Strassen Matrix Multiplication	b. Backtracking
3. Backtracking Search on a graph	c. Transform and Conquer
4. Gaussian Elimination	d. Divide and Conquer

Options:-

- 1-d, 2-b, 3-c, 4-a , **Option ID :- 317,**
- 1-b, 2-d, 3-a, 4-c , **Option ID :- 318,**
- 1-c, 2-a, 3-b, 4-a , **Option ID :- 319,**
- 1-b, 2-c, 3-a, 4-d , **Option ID :- 320,**

Answer Given by Candidate:- 1-b, 2-d, 3-a, 4-c **, Option ID : -318**

Correct Answer :- 1-b, 2-d, 3-a, 4-c **Option ID :- 318**

Section : Technical, Q81

Question ID:- 81

Consider the following CFG where p, q, r, s, t are the set of terminals.
S →saA | Bt
A →pS | qpA | ∈
B →rpAB | ∈
Given, a partially LL(1) parsing table.

	p	q	r	s	t	$
S			(X_1)	S→saA	(X_2)	
A	A→pS	A→qpA	(X_3)		A→∈	(X_4)
B			B→rpAB		B→∈	

Among the following options which are the appropriate entries for X_1, X_2, X_3, and X_4?

Options:-

X_1: S→Bt X_2: {}
X_3: A→∈ X_4: A→∈

- ,

Option ID :- 321,

X_1: S→Bt X_2: S→Bt
X_3: A→∈ X_4: A→∈

- ,

Option ID :- 322,

X_1: {} X_2: S→Bt
X_3: A→∈ X_4: {}

- ,

Option ID :- 323,

X_1: S→Bt X_2: S→Bt
X_3: A→∈ X_4: {}

- ,

Option ID :- 324,

X_1: S→Bt X_2: S→Bt
X_3: A→∈ X_4: A→∈

Answer Given by Candidate:- , Option ID : -322

X_1: S→Bt X_2: S→Bt
X_3: A→∈ X_4: A→∈

Correct Answer :- Option ID :- 322

Section : Technical, Q82

Question ID:- 82

Match the following algorithm with their respective recurrence relation or time complexity.

List I	List II
1. Kruskal's algo	a. T (n) = T (n – 1) + O(n)
2. Insertion Sort algo	b. T (n) = 2T (n/2) + n
3. Merge Sort algo	c. O(E logE) or O(V logV)

Which one of the following is TRUE?

Options:-

1-b, 2-c, 3-a

- ,

Option ID :- 325,

1-c, 2-a, 3-b

- ,

Option ID :- 326,

1- b, 2-a, 3-c

- ,

Option ID :- 327,

- 1-c, 2-b, 3-a ,

Option ID :- 328,

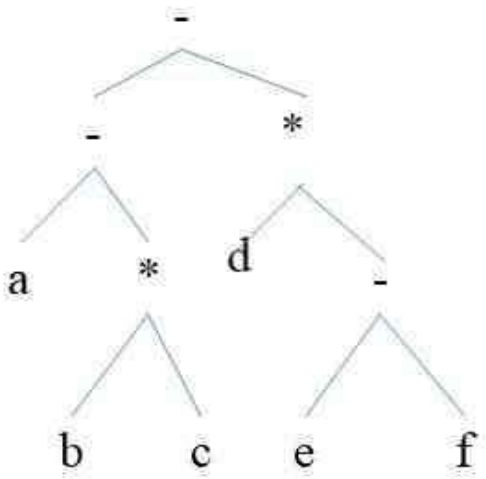
Answer Given by Candidate:- 1-c, 2-a, 3-b **, Option ID : -326**

Correct Answer :- 1-c, 2-a, 3-b **Option ID :- 326**

Section : Technical, Q83

Question ID:- 83

Consider the following abstract syntax tree and select the correct expression represented by the tree from the options:



Options:-

- ((a-b)*c)-((d*e)-f) ,

Option ID :- 329,

- (a-(b*c))-(d*(e-f)) ,

Option ID :- 330,

- (a-(b*c))-((d*e)-f) ,

Option ID :- 331,

- ((a-b)*c)-(d*(e-f)) ,

Option ID :- 332,

Answer Given by Candidate:- (a-(b*c))-(d*(e-f)) **, Option ID : -330**

Correct Answer :- (a-(b*c))-(d*(e-f)) **Option ID :- 330**

Section : Technical, Q84

Question ID:- 84

Which of the following scheduling algorithms aims to provide response time guarantees to interactive processes?

Options:-

- Round Robin , **Option ID :- 333,**
- Shortest Job Next , **Option ID :- 334,**
- Priority Scheduling , **Option ID :- 335,**
- Multilevel Feedback Queue , **Option ID :- 336,**

Answer Given by Candidate:- Round Robin **, Option ID : -333**

Correct Answer :- Multilevel Feedback Queue **Option ID :- 336**

Section : Technical, Q85

Question ID:- 85

Assume a disk has 200 cylinders. At some time, it was servicing the requests of cylinder at 110, and before that the service was for cylinder 95 (Initially). The following cylinders are in the queue for disk access requests: 30, 45, 25, 20, 80, 135, 170 and 190. How much is the difference between R/W head traverse when scheduling is done using (i) SSTF algorithm, and (ii) CSCAN algorithm

Options:-

- 110 , **Option ID :- 337,**
- 118 , **Option ID :- 338,**
- 130 , **Option ID :- 339,**
- 167 , **Option ID :- 340,**

Answer Given by Candidate:- 118 **, Option ID : -338**

Correct Answer :- 118 **Option ID :- 338**

Section : Technical, Q86

Question ID:- 86

Which of the following CPU scheduling algorithms provides the best average turnaround time for a mix of long and short processes?

Options:-

- First-Come, First-Served (FCFS) scheduling.

Option ID :- 341,

- Round Robin scheduling.

Option ID :- 342,

- Shortest Job Next (SJN) scheduling.

Option ID :- 343,

- Shortest Remaining Time (SRT) scheduling.

Option ID :- 344,

Answer Given by Candidate:- Shortest Remaining Time (SRT) scheduling. **, Option ID : -344**

Correct Answer :- Shortest Remaining Time (SRT) scheduling. **Option ID :- 344**

Section : Technical, Q87

Question ID:- 87

A solution to the Dining Philosophers Problem which avoids deadlock is:

Options:-

- ensure that all philosophers pick up the left fork before the right fork

Option ID :- 345,

- ensure that all philosophers pick up the right fork before the left fork

Option ID :- 346,

- ensure that one particular philosopher picks up the left fork before the right fork, and that all other philosophers pick up the right fork before the left fork

Option ID :- 347,

- None of the above

Option ID :- 348,

Answer Given by Candidate:-

ensure that all philosophers pick up the right fork before the left fork

, Option ID : -346

Correct Answer :-

ensure that one particular philosopher picks up the left fork before the right fork, and that all other philosophers pick up the right fork before the left fork

Option ID :- 347

Section : Technical, Q88

Question ID:- 88

Which of the following best represents the purpose of the ER model in database design?

Options:-

- To define the logical structure of the database. **,**

Option ID :- 349,

- To specify the physical storage layout of the database. **,**

Option ID :- 350,

- To establish relationships between tables in a database. **,**

Option ID :- 351,

- To enforce data integrity constraints in the database. **,**

Option ID :- 352,

Answer Given by Candidate:- To specify the physical storage layout of the database. **,**
Option ID : -350

Correct Answer :- To establish relationships between tables in a database. **Option ID :- 351**

Section : Technical, Q89

Question ID:- 89

Which of the following normal forms in database design deals with eliminating partial dependencies?

Options:-

- First Normal Form (1NF) **,**

Option ID :- 353,

Second Normal Form (2NF)

- ,

Option ID :- 354,

Third Normal Form (3NF)

- ,

Option ID :- 355,

Boyce-Codd Normal Form (BCNF)

- ,

Option ID :- 356,

Second Normal Form (2NF)

Answer Given by Candidate:- , Option ID : -354

Second Normal Form (2NF)

Correct Answer :- Option ID :- 354

Section : Technical, Q90

Question ID:- 90

Consider the following Schedule S:

T1	T2	T3
R(A)		
W(A)		
	R(A)	
		R(A)
	W(A)	

Transaction/data item	Time Stamp
T1	2
T2	5
T3	4
Initial RTS(A)	0
Initial WTS(A)	0

If we apply time stamp based protocol on the Schedule S then which of the following statement is/are TRUE?

Options:-

Transactions T2 needs to be rollback

- ,

Option ID :- 357,

Transactions T1 needs to be rollback

- ,

Option ID :- 358,

All transactions executed successfully and RTS(A)=5 and WTS(A)=5

- ,

Option ID :- 359,

Transactions T3 needs to be rollback

- ,

Option ID :- 360,

Transactions T1 needs to be rollback

Answer Given by Candidate:- , Option ID : -358

All transactions executed successfully and RTS(A)=5 and WTS(A)=5

Correct Answer :-
Option ID :- 359

Section : Technical, Q91

Question ID:- 91

Considering the following relational schema:

person (perId, pName, pAge)
supporter (sId, pId, sName, sAge)

Where, pId of the supporter is a foreign key referring to perId of the relation person. Suppose that every person has at least one associated supporter in the supporter relation. In consideration of following relational query, which evaluates to the set of perId of person whose age is greater than?
Π_{perId} (person) – Π_{perId} (person $\bowtie_{(perId=pId) \wedge (pAge \leq sAge)}$ supporter)

Options:-

- Some of his/her supporters ,

Option ID :- 361,

- All of his/her supporters ,

Option ID :- 362,

- All supporters ,

Option ID :- 363,

- Some supporters ,

Option ID :- 364,

Answer Given by Candidate:- All of his/her supporters **, Option ID : -362**

Correct Answer :- All of his/her supporters **Option ID :- 362**

Section : Technical, Q92

Question ID:- 92

Consider an Entity-Relationship (ER) model which consist entity sets A, B and C. A and B are connected by M:1 relationship R_1, B and C are connected by a 1:M (1 on the side of B and M on the side of C) relationship R_2. A has three single-valued attributes a_1, a_2 and a_3 of which a_1 is the key attribute. B has two single-valued attributes b_1 and b_2 is the key attribute. C has one single-valued attribute c_1 and one multi-valued attribute c_2.The relationship R_1 has one single-valued attribute r_1. If a relational model is derived from the above ER model, then what would be the minimum number of tables that would be generated?

Options:-

5

- ,

Option ID :- 365,

3

- ,

Option ID :- 366,

4

- ,

Option ID :- 367,

2

- ,

Option ID :- 368,

Answer Given by Candidate:- 3 **, Option ID : -366**

Correct Answer :- 4 **Option ID :- 367**

Section : Technical, Q93

Question ID:- 93

Which testing technique focuses on evaluating the system's behavior under normal and peak load conditions?

Options:-

Unit testing

- ,

Option ID :- 369,

Integration testing

- ,

Option ID :- 370,

System testing

- ,

Option ID :- 371,

Performance testing

- ,

Option ID :- 372,

Answer Given by Candidate:- Integration testing **, Option ID : -370**

Correct Answer :- Performance testing **Option ID :- 372**

Section : Technical, Q94

Question ID:- 94

Which statements about incremental model are correct?

I. You can overlap building of one increment with another.
II. You always have to use the same model for each of the increments.
III. If deploying an increment model to actual users can benefit the organization.
IV. Incremental model is always predictive model.

Select among the following.

Options:-

- I and IV ,

Option ID :- 373,

- II and III ,

Option ID :- 374,

- III only ,

Option ID :- 375,

- I and III ,

Option ID :- 376,

Answer Given by Candidate:- II and III **, Option ID : -374**

Correct Answer :- I and III **Option ID :- 376**

Section : Technical, Q95

Question ID:- 95

Why is it difficult to predict user needs and requirements for software development?

I. Difficult to understand user needs
II. Not enough time is spent on requirements. If we spend more time early, we can define requirements very accurately
III. Sometimes the market shifts from the time when the requirements were originally defined
IV. Translation issues. Requirements are misinterpreted.

Which among the given options is/are TRUE?

Options:-

- I and IV ,

Option ID :- 377,

- II and IV ,

Option ID :- 378,

I only

Option ID :- 379,

I, III and IV

Option ID :- 380,

Answer Given by Candidate:- II and IV **, Option ID : -378**

Correct Answer :- I, III and IV **Option ID :- 380**

Section : Technical, Q96

Question ID:- 96

The agile software development model is built based on _____.

Options:-

Linear Development

Option ID :- 381,

Incremental Development

Option ID :- 382,

Iterative Development

Option ID :- 383,

both Incremental and Iterative Development

Option ID :- 384,

Answer Given by Candidate:- both Incremental and Iterative Development **, Option ID : -384**

Correct Answer :- both Incremental and Iterative Development **Option ID :- 384**

Section : Technical, Q97

Question ID:- 97

Given the following regarding the development of the software system S.

Estimated lines of code: 33,480 LOC
Average Productivity: 620 LOC per person month
Number of software developers = 6
Average salary of a software developers = 50000 per month
Compute (Effort, Duration, Cost).

Options:-

(52, 7, 21)
■ ,
Option ID :- 385,

(54, 9, 20)
■ ,
Option ID :- 386,

(48, 5, 27)
■ ,
Option ID :- 387,

(54, 9, 27)
■ ,
Option ID :- 388,

Answer Given by Candidate:- (54, 9, 27) **, Option ID : -388**

Correct Answer :- (54, 9, 27) **Option ID :- 388**

Section : Technical, Q98

Question ID:- 98

Which network security concept involves using cryptographic techniques to secure communication and ensure the confidentiality and integrity of data?

Options:-

Firewalls
■ ,
Option ID :- 389,

Digital signatures
■ ,
Option ID :- 390,

Public key cryptography
■ ,
Option ID :- 391,

Private key cryptography
■ ,
Option ID :- 392,

Answer Given by Candidate:- Digital signatures **, Option ID : -390**

Correct Answer :- Public key cryptography **Option ID :- 391**

Section : Technical, Q99

Question ID:- 99

Which routing algorithm uses a distance vector approach and exchanges routing tables with neighbouring routers?

Options:-

- Dijkstra's algorithm ,

Option ID :- 393,

- Bellman-Ford algorithm ,

Option ID :- 394,

- Link-State algorithm ,

Option ID :- 395,

- OSPF algorithm ,

Option ID :- 396,

Answer Given by Candidate:- Bellman-Ford algorithm **, Option ID : -394**

Correct Answer :- Bellman-Ford algorithm **Option ID :- 394**

Section : Technical, Q100

Question ID:- 100

Consider two computers, X and Y connected via a single Bandwidth 512 Gbps. Suppose that both hosts are separated by distance M meters, and the link speed is $2x10^9$ meter/sec. The computer X has to send a packet of size 1 KB to computer Y. What will be the distance M such that the delay in propagation is equal to the delay in transmission?

Options:-

- 35 meter ,

Option ID :- 397,

- 34 meter ,

Option ID :- 398,

- 32 meter ,

Option ID :- 399,

- 33 meter ,

Option ID :- 400,

Answer Given by Candidate:- 34 meter **, Option ID : -398**

Correct Answer :- 32 meter **Option ID :- 399**

Section : Technical, Q101

Question ID:- 101

A subnetted Class B network has the following broadcast address: 144.16.95.255
Following possible subnet mask is/are:

I. 255.255. 224.0
II. 255.255.240.0
III. 255.255.248.0
IV. 255.255.224.0

Which of the following option is correct?

Options:-

- I only
  ,
  Option ID :- 401,
- I and III only
  ,
  Option ID :- 402,
- I, II and IV only
  ,
  Option ID :- 403,
- I, II, III and IV
  ,
  Option ID :- 404,

Answer Given by Candidate:- I and III only **, Option ID : -402**

Correct Answer :- I, II, III and IV **Option ID :- 404**

Section : Technical, Q102

Question ID:- 102

Match the following data and select the correct option.

A. ARP	I. Router finds a problem in IP header.
B. RARP	II. Router discards the packet if TTL=0
C. ICMP Destination Unreachable	III. Router Buffer is full.
D. ICMP Source Quench	IV. Router failed to identify the Destination Address
E. ICMP Time Exceeded	V. To find IP address using MAC address
F. ICMP Parameter Problem	VI. To find MAC address using IP address

Options:-

- A-VI, B-V, C-IV, D-I, E-II, F-III
  ,
  Option ID :- 405,
- A-VI, B-V, C-IV, D-III, E-II, F-I
  ,
  Option ID :- 406,

- A-V, B-VI, C-IV, D-I, E-II, F-III ,

Option ID :- 407,

- A-VI, B-V, C-I, D-III, E-II, F-IV ,

Option ID :- 408,

Answer Given by Candidate:- A-VI, B-V, C-IV, D-III, E-II, F-I **, Option ID : -406**

Correct Answer :- A-VI, B-V, C-IV, D-III, E-II, F-I **Option ID :- 406**

Section : Technical, Q103

Question ID:- 103

Which component of the MVC architecture is responsible for defining the structure and behaviour of the data in an application?

Options:-

- Model ,

Option ID :- 409,

- View ,

Option ID :- 410,

- Controller ,

Option ID :- 411,

- Middleware ,

Option ID :- 412,

Answer Given by Candidate:- Model **, Option ID : -409**

Correct Answer :- Model **Option ID :- 409**

Section : Technical, Q104

Question ID:- 104

Match the following data related to MVC architecture and choose the correct option from those given below.

1. Model	i) responsible for handling user interactions and updating the other components
2. View	ii) responsible for managing the flow of requests and determining which actions to perform
3. Controller	iii) responsible for rendering the user interface and presenting the data
4. Router	iv) represents the data and business logic of the application

Options:-

- 1-iii, 2-i, 3-iv, 4-ii ,
Option ID :- 413,
- 1-ii, 2-iii, 3-i, 4-iv ,
Option ID :- 414,
- 1-iv, 2-ii, 3-i, 4-iii ,
Option ID :- 415,
- 1-iv, 2-iii, 3-i, 4-ii ,
Option ID :- 416,

Answer Given by Candidate:- 1-iv, 2-iii, 3-i, 4-ii **, Option ID : -416**

Correct Answer :- 1-iv, 2-iii, 3-i, 4-ii **Option ID :- 416**

Section : Technical, Q105

Question ID:- 105

Which of the following web technologies is used for real-time two-way communication between the client and server?

Options:-

- WebRTC (Web Real-Time Communication) ,
Option ID :- 417,
- WebSocket ,
Option ID :- 418,

WebAssembly

■ ,

Option ID :- 419,

Web Storage

■ ,

Option ID :- 420,

Answer Given by Candidate:- WebSocket **, Option ID : -418**

Correct Answer :- WebSocket **Option ID :- 418**

Section : Technical, Q106

Question ID:- 106

Which of the following is a typical use case for a reverse proxy server?

Options:-

Load balancing incoming client requests.

■ ,

Option ID :- 421,

Filtering and blocking specific website content.

■ ,

Option ID :- 422,

Caching static content to improve performance.

■ ,

Option ID :- 423,

Authenticating and authorizing user access

■ ,

Option ID :- 424,

Answer Given by Candidate:- Filtering and blocking specific website content. **, Option ID : -422**

Correct Answer :- Load balancing incoming client requests. **Option ID :- 421**

Section : Technical, Q107

Question ID:- 107

Which of the following elements in HTML5 is used to draw graphics on a web page?

Options:-

<canvas>

■ ,

Option ID :- 425,

<image>

■ ,

Option ID :- 426,

<figure>
■ ,
Option ID :- 427,

<graphic>
■ ,
Option ID :- 428,

Answer Given by Candidate:- <image> **, Option ID : -426**

Correct Answer :- <canvas> **Option ID :- 425**

Section : Technical, Q108

Question ID:- 108

Which of the following is a secure programming practice to prevent SQL injection attacks?

Options:-

Using dynamically generated SQL queries
■ ,
Option ID :- 429,

Using prepared statements or parameterized queries
■ ,
Option ID :- 430,

Storing sensitive data in plain text
■ ,
Option ID :- 431,

Disabling input validation
■ ,
Option ID :- 432,

Answer Given by Candidate:- Using prepared statements or parameterized queries **, Option ID : -430**

Correct Answer :- Using prepared statements or parameterized queries **Option ID :- 430**

Section : Technical, Q109

Question ID:- 109

Match the following data related to OWASP top 10 vulnerabilities and choose the correct option from those given below.

1) Insecure design	i) an application relies upon plugins, libraries, or modules from untrusted sources
2) Cryptographic Failures	ii) a web application is fetching a remote resource without validating the user-supplied URL
3) Software and data integrity failures	iii) data falls under privacy laws (i.e., GDPR, PCI DSS) require more protection
4) Server-side request Forgery	iv) missing or ineffective control design

Options:-

1-iii, 2-iv, 3-i, 4-ii

Option ID :- 433,

1-iv, 2-iii, 3-i, 4-ii

Option ID :- 434,

1-iii, 2-i, 3-iv, 4-ii

Option ID :- 435,

1-ii, 2-iii, 3-i, 4-iv

Option ID :- 436,

Answer Given by Candidate:- 1-iv, 2-iii, 3-i, 4-ii **, Option ID : -434**

Correct Answer :- 1-iv, 2-iii, 3-i, 4-ii **Option ID :- 434**

Section : Technical, Q110

Question ID:- 110

Which of the following vulnerabilities refers to the exploitation of application functionality in an unintended way?

Options:-

Insecure Direct Object References

Option ID :- 437,

Cross-Site Scripting (XSS)

Option ID :- 438,

Broken Authentication

Option ID :- 439,

Unvalidated Redirects and Forwards

- ,

Option ID :- 440,

Cross-Site Scripting (XSS)

Answer Given by Candidate:- , Option ID : -438

Insecure Direct Object References

Correct Answer :- Option ID :- 437

Section : Technical, Q111

Question ID:- 111

Which of the following best describes the concept of edge computing in the context of IoT?

Options:-

Processing data on the cloud servers

- ,

Option ID :- 441,

Centralizing all computation on a single device

- ,

Option ID :- 442,

Distributing computation closer to the data source

- ,

Option ID :- 443,

Offloading computation to third-party servers

- ,

Option ID :- 444,

Distributing computation closer to the data source

Answer Given by Candidate:- ,
Option ID : -443

Distributing computation closer to the data source

Correct Answer :- Option ID :- 443

Section : Technical, Q112

Question ID:- 112

Match the following data related to IoT and choose the correct option from those given below.

1)	Zigbee	i)	protocol used to enable devices from different manufacturers to interoperate and communicate with each other seamlessly
2)	Mesh	ii)	used in IoT devices for short-range wireless communication
3)	Thread	iii)	involves flooding a network or device with a massive amount of data, causing it to become overwhelmed and unresponsive
4)	DoS Attack	iv)	allows devices to communicate directly with each other without relying on a centralized cloud server

Options:-

- 1-iii, 2-i, 3-iv, 4-ii ,

Option ID :- 445,

- 1-ii, 2-iii, 3-i, 4-iv ,

Option ID :- 446,

- 1-ii, 2-iv, 3-i, 4-iii ,

Option ID :- 447,

- 1-iv, 2-i, 3-ii, 4-iii ,

Option ID :- 448,

Answer Given by Candidate:- 1-iv, 2-i, 3-ii, 4-iii **, Option ID : -448**

Correct Answer :- 1-ii, 2-iv, 3-i, 4-iii **Option ID :- 447**

Section : Technical, Q113

Question ID:- 113

Which technology allows for dynamic allocation of network resources based on application demand and traffic patterns?

Options:-

- Quality of Service (QoS) ,

Option ID :- 449,

- Software-defined networking (SDN) ,

Option ID :- 450,

Virtual Local Area Network (VLAN)
,
Option ID :- 451,

Network Address Translation (NAT)
,
Option ID :- 452,

Answer Given by Candidate:- Software-defined networking (SDN) **, Option ID : -450**

Correct Answer :- Software-defined networking (SDN) **Option ID :- 450**

Section : Technical, Q114

Question ID:- 114

Match the following data related to cloud computing and choose the correct option from those given below.

1) Software as a Service	i) Oracle Cloud Platform, Microsoft Azure App Service, Google App Engine,
2) Platform as a Service	ii) AWS EC2, DigitalOcean, Google Compute Engine
3) Infrastructure as a Service	iii) Microsoft 365, Google Workspace, Cisco WebEx, Zoom, Adobe Creative Cloud, Dropbox

Options:-

1-iii, 2-i, 3-ii
,
Option ID :- 453,

1-ii, 2-iii, 3-i
,
Option ID :- 454,

1-ii, 2-i, 3-iii
,
Option ID :- 455,

1-i, 2-iii, 3-ii
,
Option ID :- 456,

Answer Given by Candidate:- 1-ii, 2-iii, 3-i **, Option ID : -454**

Correct Answer :- 1-iii, 2-i, 3-ii **Option ID :- 453**

Section : Technical, Q115

Question ID:- 115

Which of the following statements best describes edge computing?

Options:-

- Processing and data storage performed on remote cloud servers

Option ID :- 457,

- Centralizing all computation and storage on edge devices

Option ID :- 458,

- Distributing computation and storage closer to the data source or device

Option ID :- 459,

- Offloading computation and storage to a dedicated edge network

Option ID :- 460,

Answer Given by Candidate:-

Distributing computation and storage closer to the data source or device **, Option ID : -459**

Correct Answer :-

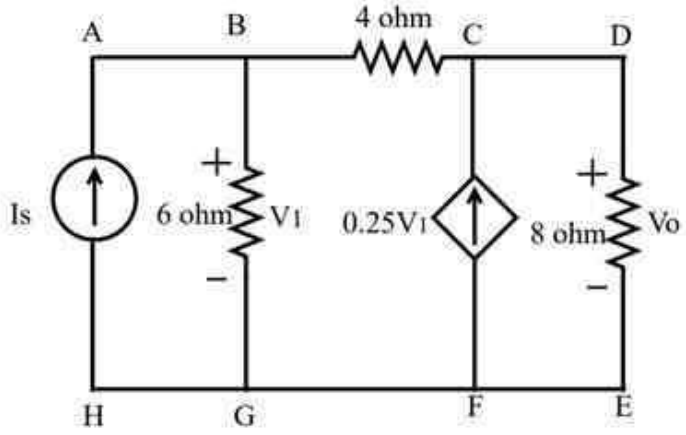
Distributing computation and storage closer to the data source or device

Option ID :- 459

Section : Technical, Q116

Question ID:- 116

Determine the current Is in the electric circuit below. (Take Vo=16V)



Options:-

- 1A

Option ID :- 461,

- 3A

Option ID :- 462,

- 5A ,

Option ID :- 463,

- 7A ,

Option ID :- 464,

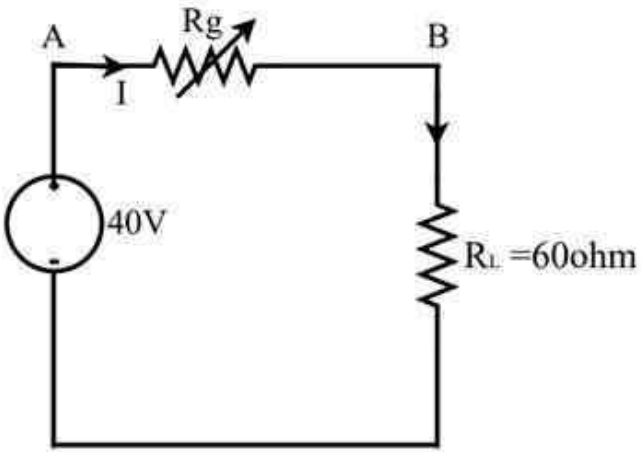
Answer Given by Candidate:- 1A **, Option ID : -461**

Correct Answer :- 1A **Option ID :- 461**

Section : Technical, Q117

Question ID:- 117

If Rg in the circuit shown in the figure is variable between 20Ω and 80Ω then the maximum power transferred to the load RL will be _____.



Options:-

- 15W ,

Option ID :- 465,

- 13.33W ,

Option ID :- 466,

- 6.67W ,

Option ID :- 467,

- 2.4 W ,

Option ID :- 468,

Answer Given by Candidate:- 6.67W **, Option ID : -467**

Correct Answer :- 15W **Option ID :- 465**

Section : Technical, Q118

Question ID:- 118

The RMS value of the resultant current in a wire which carries a dc current of 30 A and a sinusoidal alternating current of peak value 40 A is _____.

Options:-

41.23

Option ID :- 469,

65.43

Option ID :- 470,

71.34

Option ID :- 471,

89.67

Option ID :- 472,

Answer Given by Candidate:- 65.43 **, Option ID : -470**

Correct Answer :- 41.23 **Option ID :- 469**

Section : Technical, Q119

Question ID:- 119

An electromagnetic field is radiated from _____.

Options:-

A stationary point charge

Option ID :- 473,

A capacitor with a DC voltage

Option ID :- 474,

A conductor carrying a DC current

Option ID :- 475,

An oscillating dipole

Option ID :- 476,

Answer Given by Candidate:- An oscillating dipole **, Option ID : -476**

Correct Answer :- A capacitor with a DC voltage **Option ID :- 474**

Section : Technical, Q120

Question ID:- 120

A single phase thyristor-bridge rectifier is fed from a 230V, 50Hz, single phase AC mains. If it is delivering a constant DC current of 10A, at firing angle of 30º, then value of the power factor at AC mains is _____.

Options:-

- 0.87 ,

Option ID :- 477,

- 0.9 ,

Option ID :- 478,

- 0.78 ,

Option ID :- 479,

- 0.45 ,

Option ID :- 480,

Answer Given by Candidate:- 0.78 **, Option ID : -479**

Correct Answer :- 0.78 **Option ID :- 479**