

**NIC Scientific Tech Assistant A S2**  
**(Candidate Response Sheet)**

<b>Roll Number</b>	<b>32201180020</b>
<b>Name of the Candidate</b>	<b>SYEED MOHD AMEEN</b>
<b>Examination Name</b>	<b>NIC Scientific Tech Assistant A S2</b>
<b>Exam Date &amp; Time</b>	<b>14-12-2023 03:00:00</b>

**Section : Generic, Q01****Question ID:- 1**

Reentry occurs when a person leaves his or her social system for a period of time and then returns. Which situation below best describes Reentry?

**Options:-**

- When he is offered a better paying position, Javed leaves the hotel he manages to manage another one in a neighboring city.

**Option ID :- 1,**

Charan is spending her final year of college studying abroad in China.

**Option ID :- 2,**

Manan is readjusting to civilian life after 2 years of overseas merchant navy service.

**Option ID :- 3,**

After 5 miserable months, Sneha decides that she can no longer share her room with roommate Hital.

**Option ID :- 4,**

Charan is spending her final year of college studying abroad in China.

**Answer Given by Candidate:-**

**ID : -2**

**, Option**

**Correct Answer :-**

Manan is readjusting to civilian life after 2 years of overseas merchant navy service.

**Option ID :- 3**

**Section : Generic, Q02****Question ID:- 2**

Kevin, Joseph, and Nicholas are 3 brothers. If the following statements are all true, which of them is the youngest?

- Kevin is the oldest.
- Nicholas is not the oldest.
- Joseph is not the youngest.

**Options:-**

- Joseph

**Option ID :- 5,**

Kevin

**Option ID :- 6,**

Nicholas

**Option ID :- 7,**

Both Joseph and Nicholas

**Option ID :- 8,**

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

**Correct Answer :-** Nicholas **Option ID :- 7**

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**Section : Generic, Q03**

**Question ID:- 3**

'A + B' means that A is the father of B, 'A-B' means that A is the wife of B, 'AXB' means that A is the brother of B, 'A + B' means that A is the mother of B and 'A= B' means that A is the sister of B. On the basis of this information — What does 'P+Q-R' means?

**Options:-**

P is the father-in-law of R

**Option ID :- 9,**

P is the son of R

**Option ID :- 10,**

P is the uncle of R

**Option ID :- 11,**

P is the brother of R

**Option ID :- 12,**

**Answer Given by Candidate:-** P is the father-in-law of R , **Option ID :-9**

**Correct Answer :-** P is the father-in-law of R **Option ID :- 9**

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**Section : Generic, Q04**

**Question ID:- 4**

K, L, M, N, P, Q, R, S, U and W are the only ten members in a department. There is a proposal to form a team from within the members of the department, subject to the following conditions:

The size of a team is defined as the no. of members in the team.

A team must include exactly one among P, R, and S.

A team must include either M or Q, but not both.

If a team includes K, then it must also include L, and vice versa.

If a team includes one among S, U, & W, then it must also include the other two.

L & N cannot be members of the same team.

L & U cannot be members of the same team.

Who cannot be a member of a team of size 3?

**Options:-**

**Option ID :- 13,**

L

**Option ID :- 14,**

M

**Option ID :- 15,**

N

**Option ID :- 16,**

P

**Answer Given by Candidate:- M , Option ID : -14**

**Correct Answer :- L Option ID :- 13**

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### **Section : Generic, Q05**

#### **Question ID:- 5**

K, L, M, N, P, Q, R, S, U and W are the only ten members in a department. There is a proposal to form a team from within the members of the department, subject to the following conditions:

The size of a team is defined as the no. of members in the team.

A team must include exactly one among P, R, and S.

A team must include either M or Q, but not both.

If a team includes K, then it must also include L, and vice versa.

If a team includes one among S, U, & W, then it must also include the other two.

L & N cannot be members of the same team.

L & U cannot be members of the same team.

What would be the size of the largest possible team?

#### **Options:-**

■ 8 ,

**Option ID :- 17,**

■ 7 ,

**Option ID :- 18,**

■ 6 ,

**Option ID :- 19,**

■ 5 ,

**Option ID :- 20,**

**Answer Given by Candidate:- 7 , Option ID : -18**

**Correct Answer :- 5 Option ID :- 20**

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### **Section : Generic, Q06**

#### **Question ID:- 6**

K, L, M, N, P, Q, R, S, U and W are the only ten members in a department. There is a proposal to form a team from within the members of the department, subject to the following conditions:

The size of a team is defined as the no. of members in the team.

A team must include exactly one among P, R, and S.

A team must include either M or Q, but not both.

If a team includes K, then it must also include L, and vice versa.

If a team includes one among S, U, & W, then it must also include the other two.

L & N cannot be members of the same team.

L & U cannot be members of the same team.

In how many ways a team can be constituted so that the team includes N?

#### **Options:-**

■ 5 ,

**Option ID :- 21,**

■ 4 ,

**Option ID :- 22,**

6

■ ,  
**Option ID :- 23,**

3

■ ,  
**Option ID :- 24,**

**Answer Given by Candidate:- 4 , Option ID : -22**

**Correct Answer :- 6 Option ID :- 23**

### **Section : Generic, Q07**

**Question ID:- 7**

**Directions:** Question given below is based on the following information:

- 1. A + B means A is the mother of B.
- 2. A - B means A is the sister of B.
- 3. A \* B means A is the father of B.
- 4. A β B means A is the brother of B.

Which of the following means Q is the grandfather of P?

**Options:-**

P + N \* M \* Q

■ ,  
**Option ID :- 25,**

Q \* N \* M + P

■ ,  
**Option ID :- 26,**

Q β M β N \* P

■ ,  
**Option ID :- 27,**

None of these

■ ,  
**Option ID :- 28,**

**Answer Given by Candidate:- None of these , Option ID : -28**

**Correct Answer :- None of these Option ID :- 28**

### **Section : Generic, Q08**

**Question ID:- 8**

Fill the blank in for the following series.

ELFA, GLHA, ILJA, \_\_\_\_\_, MLNA

**Options:-**

LLMA

■ ,  
**Option ID :- 29,**

OLPA

■ ,  
**Option ID :- 30,**

KLLA

■ ,  
**Option ID :- 31,**

KLMA

■ ,  
**Option ID :- 32,**

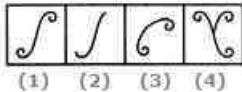
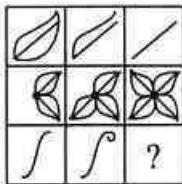
**Answer Given by Candidate:- KLLA , Option ID : -31**

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

### **Section : Generic, Q09**

**Question ID:- 9**

Select a suitable figure from the four alternatives that would complete the figure matrix.



#### Options:-

- 1 ,  
**Option ID :- 33,**

- 2 ,  
**Option ID :- 34,**

- 3 ,  
**Option ID :- 35,**

- 4 ,  
**Option ID :- 36,**

**Answer Given by Candidate:- 1 , Option ID : -33**

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

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#### Section : Generic, Q10

#### Question ID:- 10

Here are some words translated from an artificial language.

- dionot means oak tree
- blyonot means oak leaf
- blycrin means maple leaf

Which word could mean "maple syrup"?

#### Options:-

- blymuth  
,
- Option ID :- 37,**

- hupponot  
,
- Option ID :- 38,**

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

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

**Answer Given by Candidate:- crinonot , Option ID : -40**

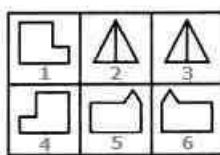
**Correct Answer :- patricrin Option ID :- 39**

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#### Section : Generic, Q11

#### Question ID:- 11

Group the given figures into three classes using each figure only once.



#### Options:-

1,4 ; 2,3 ; 5,6

#### Option ID :- 41,

1,5 ; 2,6 ; 4,3

#### Option ID :- 42,

1,6 ; 2,3 ; 4,5

#### Option ID :- 43,

1,2 ; 3,6 ; 4,5

#### Option ID :- 44,

1,4 ; 2,3 ; 5,6

, Option ID : -41

#### Answer Given by Candidate:-

1,4 ; 2,3 ; 5,6

Option ID :- 41

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#### Section : Generic, Q12

#### Question ID:- 12

**Statement:** "Please put more people on the job to make up for the delay."

**Assumptions:**

- I. Delay is inevitable in most jobs.
- II. Output will increase with more number of people on the job.

#### Options:-

Only assumption I is implicit

#### Option ID :- 45,

Only assumption II is implicit

#### Option ID :- 46,

Either I or II is implicit

#### Option ID :- 47,

Neither I nor II is implicit

#### Option ID :- 48,

Only assumption II is implicit

, Option ID : -46

#### Answer Given by Candidate:-

Only assumption II is implicit

Option ID :- 46

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#### Section : Generic, Q13

#### Question ID:- 13

**Statements:** Although we have rating agencies like Crisil, ICRA, there is demand to have a separate rating agency for IT companies to protect investors.

**Conclusions:**

- I. Assessment of financial worth of IT companies calls for separate set of skills, insight and competencies.
- II. Now the investors investing in IT companies will get protection of their investment.

**Options:-**

Only conclusion I follow

**Option ID :- 49,**

Only conclusion II follows

**Option ID :- 50,**

Either I or II follows

**Option ID :- 51,**

Neither I nor II follows

**Option ID :- 52,**

**Answer Given by Candidate:-** Only conclusion II follows , **Option ID : -50**

**Correct Answer :-** Only conclusion I follow **Option ID :- 49**

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**Section : Generic, Q14****Question ID:- 14**

**Statement:** Should all the drugs patented and manufactured in Western countries be first tried out on sample basis before giving license for sale to general public in India?

**Arguments:**

- I. Yes. Many such drugs require different doses and duration for Indian population and hence it is necessary.
- II. No. This is just not feasible and hence cannot be implemented.

**Options:-**

Only argument I is strong

**Option ID :- 53,**

Only argument II is strong

**Option ID :- 54,**

Either argument I or II is strong

**Option ID :- 55,**

Neither argument I or II is strong

**Option ID :- 56,**

**Answer Given by Candidate:-** Only argument II is strong , **Option ID : -54**

**Correct Answer :-** Only argument I is strong **Option ID :- 53**

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**Section : Generic, Q15****Question ID:- 15**

SCD, TEF, UGH, \_\_\_\_\_, WKL

**Options:-**

CMN

**Option ID :- 57,**

UJI

**Option ID :- 58,**

VIJ

**Option ID :- 59,**

IJT

**Option ID :- 60,**

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

**Correct Answer :- VIJ Option ID :- 59**

### **Section : Generic, Q16**

#### **Question ID:- 16**

Look at this series: 80, 10, 70, 15, 60, ... What number should come next?

#### **Options:-**

- 20 ,  
**Option ID :- 61,**
- 25 ,  
**Option ID :- 62,**
- 30 ,  
**Option ID :- 63,**
- 50 ,  
**Option ID :- 64,**

**Answer Given by Candidate:- 20 , Option ID : -61**

**Correct Answer :- 20 Option ID :- 61**

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### **Section : Generic, Q17**

#### **Question ID:- 17**

Find the length of the plank which can be used to measure exactly the lengths 4 m 50 cm, 9 m 90 cm, and 16 m 20 cm in the least time.

#### **Options:-**

- 50 cm ,  
**Option ID :- 65,**
- 90cm ,  
**Option ID :- 66,**
- 70 cm ,  
**Option ID :- 67,**
- 80 cm ,  
**Option ID :- 68,**

**Answer Given by Candidate:- 90cm , Option ID : -66**

**Correct Answer :- 90cm Option ID :- 66**

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### **Section : Generic, Q18**

#### **Question ID:- 18**

Three pipes A, B, and C are connected to a tank. Out of the three, A and B are the inlet pipes and C is the outlet pipe. If opened separately, A fills the tank in 10 hours, B fills the tank in 12 hours and C empties the tank in 30 hours. If all three are opened simultaneously, how much time does it take to fill / empty the tank?

#### **Options:-**

- 5 hours 40 minutes ,  
**Option ID :- 69,**
- 7 hours 35 minutes ,  
**Option ID :- 70,**
- 6 hours 40 minutes ,  
**Option ID :- 71,**

■ 5 hours 35 minutes ,

**Option ID :- 72,**

**Answer Given by Candidate:- 7 hours 35 minutes , Option ID : -70**

**Correct Answer :- 6 hours 40 minutes Option ID :- 71**

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**Section : Generic, Q19**

**Question ID:- 19**

If every 2 out of 3 readymade shirts need alterations in the sleeves, 3 out of 4 in collar and every 4 out of 5 need in the body, how many alterations will be required for 60 shirts?

**Options:-**

■ 24 ,

**Option ID :- 73,**

■ 123 ,

**Option ID :- 74,**

■ 133 ,

**Option ID :- 75,**

■ 143 ,

**Option ID :- 76,**

**Answer Given by Candidate:- 123 , Option ID : -74**

**Correct Answer :- 133 Option ID :- 75**

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**Section : Generic, Q20**

**Question ID:- 20**

If tripling a number and adding 10 to the result gives the same answer as multiplying the number by 4 and taking away 20 from the product, the number is \_\_\_\_\_

**Options:-**

■ 32 ,

**Option ID :- 77,**

■ 35 ,

**Option ID :- 78,**

■ 30 ,

**Option ID :- 79,**

■ 36 ,

**Option ID :- 80,**

**Answer Given by Candidate:- 30 , Option ID : -79**

**Correct Answer :- 30 Option ID :- 79**

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**Section : Generic, Q21**

**Question ID:- 21**

Two friends A and B are employed to do a piece of work in 18 days. If A is twice as efficient as B, find the time taken by A to do the work alone.

**Options:-**

■ 54 days ,

**Option ID :- 81,**

■ 50 days ,

**Option ID :- 82,**

30 days

■ **Option ID :- 83,**

27 days

■ **Option ID :- 84,**

**Answer Given by Candidate:-** 27 days , **Option ID : -84**

**Correct Answer :-** 27 days **Option ID :- 84**

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## Section : Generic, Q22

### Question ID:- 22

The ratio of the age of a man and his wife is 6:5. After 16 years, the ratio becomes 10:9.  
Find the husband's age when the wife was born.

#### Options:-

■ 9 years

■ **Option ID :- 85,**

2 years

■ **Option ID :- 86,**

4 years

■ **Option ID :- 87,**

3 years

■ **Option ID :- 88,**

**Answer Given by Candidate:-** 4 years , **Option ID : -87**

**Correct Answer :-** 4 years **Option ID :- 87**

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## Section : Generic, Q23

### Question ID:- 23

An enterprising businessman earns an income of Rs. 1 on the first day of his business.  
On every subsequent day, he earn some income which is just double of that made on the previous day. On the 10<sup>th</sup> day of business, his income is \_\_\_\_\_.

#### Options:-

■ Rs. 2<sup>9</sup>

■ **Option ID :- 89,**

Rs. 2<sup>10</sup>

■ **Option ID :- 90,**

Rs. 10

■ **Option ID :- 91,**

Rs. 10<sup>2</sup>

■ **Option ID :- 92,**

**Answer Given by Candidate:-** Rs. 2<sup>9</sup> , **Option ID : -89**

**Correct Answer :-** Rs. 2<sup>9</sup> **Option ID :- 89**

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## Section : Generic, Q24

### Question ID:- 24

Ram goes from place P to Q to buy an article costing 20% less at Q. Although he spends Rs 200 on travelling, still he gains Rs 200 compared to buying at P. His profit percent is \_\_\_\_\_.

**Options:-**

- 28 % ,  
**Option ID :- 93,**
- 32 % ,  
**Option ID :- 94,**
- 10% ,  
**Option ID :- 95,**
- 64 % ,  
**Option ID :- 96,**

**Answer Given by Candidate:- 10% , Option ID : -95**

**Correct Answer :- 10% Option ID :- 95**

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**Section : Generic, Q25****Question ID:- 25**

What is the number of possible words that can be made using the word "EASYQUIZ" such that the vowels always come together?

**Options:-**

- 120 ,  
**Option ID :- 97,**
- 720 ,  
**Option ID :- 98,**
- 2880 ,  
**Option ID :- 99,**
- 4320 ,  
**Option ID :- 100,**

**Answer Given by Candidate:- 720 , Option ID : -98**

**Correct Answer :- 2880 Option ID :- 99**

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**Section : Generic, Q26****Question ID:- 26**

If the numerator of a fraction is decreased by 15% and its denominator is diminished by 10%, the value of the fraction is  $\frac{2}{9}$ . Find the original fraction.

**Options:-**

- $\frac{5}{17}$  ,  
**Option ID :- 101,**
- $\frac{3}{17}$  ,  
**Option ID :- 102,**
- $\frac{4}{15}$  ,  
**Option ID :- 103,**
- $\frac{4}{17}$  ,  
**Option ID :- 104,**

**Answer Given by Candidate:- 4/17 , Option ID : -104**

**Correct Answer :- 4/17 Option ID :- 104**

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**Section : Generic, Q27**

## **Question ID:- 27**

At the end of a business conference the ten people present all shake hands with each other once. How many handshakes will there be altogether?

### **Options:-**

■ 20 ,

**Option ID :- 105,**

■ 45 ,

**Option ID :- 106,**

■ 55 ,

**Option ID :- 107,**

■ 90 ,

**Option ID :- 108,**

**Answer Given by Candidate:- 45 , Option ID : -106**

**Correct Answer :- 45 Option ID :- 106**

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## **Section : Generic, Q28**

### **Question ID:- 28**

Aakash wants to invest a part of Rs. 12000 at Rs. 120 in 12% stock. He wants to invest the remaining amount at Rs. 125 in 15% stock. The total dividend he receives per year is Rs. 1360. Find the amount that Aakash should invest in 12% stock at Rs. 120.

### **Options:-**

■ Rs 3500 ,

**Option ID :- 109,**

■ Rs 4500 ,

**Option ID :- 110,**

■ Rs 4000 ,

**Option ID :- 111,**

■ Rs 4800 ,

**Option ID :- 112,**

**Answer Given by Candidate:- Rs 4500 , Option ID : -110**

**Correct Answer :- Rs 4000 Option ID :- 111**

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## **Section : Generic, Q29**

### **Question ID:- 29**

The price of 2 sarees and 4 shirts is Rs. 1600. With the same money one can buy 1 saree and 6 shirts. If one wants to buy 12 shirts, how much shall he have to pay?

### **Options:-**

■ Rs1200 ,

**Option ID :- 113,**

■ Rs 2400 ,

**Option ID :- 114,**

■ Rs 2600 ,

**Option ID :- 115,**

■ Rs 2800 ,

**Option ID :- 116,**

**Answer Given by Candidate:-** Rs 2400 , **Option ID : -114**

**Correct Answer :-** Rs 2400 **Option ID :- 114**

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### Section : Generic, Q30

#### Question ID:- 30

Free notebooks were distributed equally among children of a class. The number of notebooks each child got was one-eighth of the number of children. Had the number of children been half, each child would have got 16 notebooks. Total how many notebooks were distributed?

#### Options:-

■ 500 ,

**Option ID :- 117,**

■ 504 ,

**Option ID :- 118,**

■ 510 ,

**Option ID :- 119,**

■ 512 ,

**Option ID :- 120,**

**Answer Given by Candidate:-** 512 , **Option ID : -120**

**Correct Answer :-** 512 **Option ID :- 120**

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### Section : Generic, Q31

#### Question ID:- 31

The least perfect square which is divisible by each of 21, 36 and 66 is:

#### Options:-

■ 213444 ,

**Option ID :- 121,**

■ 214344 ,

**Option ID :- 122,**

■ 214434 ,

**Option ID :- 123,**

■ 231444 ,

**Option ID :- 124,**

**Answer Given by Candidate:-** 214344 , **Option ID : -122**

**Correct Answer :-** 213444 **Option ID :- 121**

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### Section : Generic, Q32

#### Question ID:- 32

Three times the first of three consecutive odd integers is 3 more than twice the third. The third integer is:

#### Options:-

■ 15 ,

**Option ID :- 125,**

■ 9 ,

**Option ID :- 126,**

11

Option ID :- 127,

13

Option ID :- 128,

Answer Given by Candidate:- 15 , Option ID : -125

Correct Answer :- 15 Option ID :- 125

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### Section : Generic, Q33

#### Question ID:- 33

If Sunday falls on the day before yesterday, what day will it be the day after tomorrow?

##### Options:-

Wednesday

Option ID :- 129,

Saturday

Option ID :- 130,

Tuesday

Option ID :- 131,

Thursday

Option ID :- 132,

Answer Given by Candidate:- Thursday , Option ID : -132

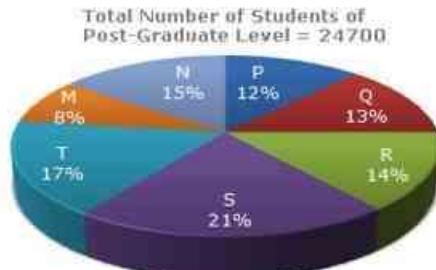
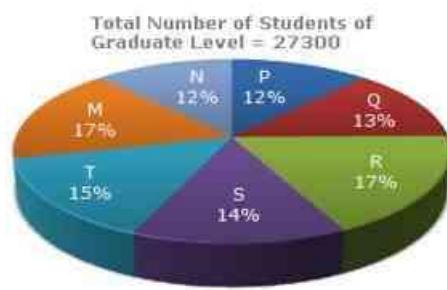
Correct Answer :- Thursday Option ID :- 132

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### Section : Generic, Q34

#### Question ID:- 34

The following pie-charts show the distribution of students of graduate and post-graduate levels in seven different institutes in a town. Distribution of students at graduate and post- graduate levels in seven institutes:



What is the total number of graduate and post-graduate level students in institute R?

##### Options:-

- 8320 ,  
**Option ID :- 133,**
- 7916 ,  
**Option ID :- 134,**
- 9116 ,  
**Option ID :- 135,**
- 8099 ,  
**Option ID :- 136,**

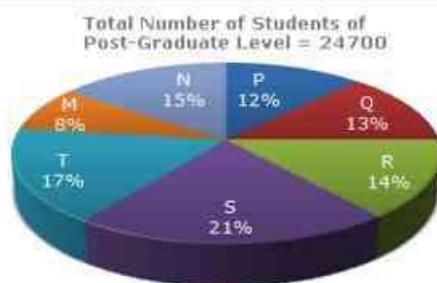
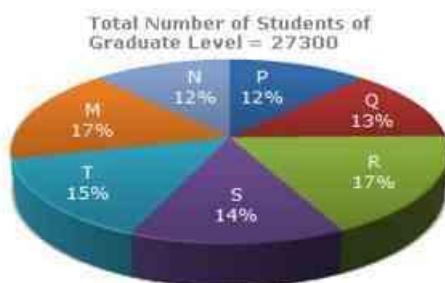
**Answer Given by Candidate:- 8099 , Option ID : -136**

**Correct Answer :- 8099 Option ID :- 136**

### Section : Generic, Q35

#### Question ID:- 35

The following pie-charts show the distribution of students of graduate and post-graduate levels in seven different institutes in a town. Distribution of students at graduate and post-graduate levels in seven institutes:



What is the ratio between the number of students studying at post-graduate and graduate levels respectively from institute S?

#### Options:-

- 14:19 ,  
**Option ID :- 137,**
- 19:21 ,  
**Option ID :- 138,**
- 17:21 ,  
**Option ID :- 139,**
- 19:14 ,  
**Option ID :- 140,**

**Answer Given by Candidate:- 19:14 , Option ID : -140**

**Correct Answer :- 19:14 Option ID :- 140**

### Section : Generic, Q36

#### Question ID:- 36

One morning Udai and Vishal were talking to each other face to face at a crossing. If Vishal's shadow was exactly to the left of Udai, which direction was Udai facing?

**Options:-**

■ East ,

**Option ID :- 141,**

■ West ,

**Option ID :- 142,**

■ North ,

**Option ID :- 143,**

■ South ,

**Option ID :- 144,**

**Answer Given by Candidate:-** North , **Option ID : -143**

**Correct Answer :-** North **Option ID :- 143**

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**Section : Generic, Q37**

**Question ID:- 37**

Y is in the East of X which is in the North of Z. If P is in the South of Z, then in which direction of Y, is P?

**Options:-**

■ North ,

**Option ID :- 145,**

■ South ,

**Option ID :- 146,**

■ South-East ,

**Option ID :- 147,**

■ None of these ,

**Option ID :- 148,**

**Answer Given by Candidate:-** None of these , **Option ID : -148**

**Correct Answer :-** None of these **Option ID :- 148**

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**Section : Generic, Q38**

**Question ID:- 38**

BCFG, JKNO, RSVW, ?

**Options:-**

■ ZADE ,

**Option ID :- 149,**

■ HIKL ,

**Option ID :- 150,**

■ STUX ,

**Option ID :- 151,**

■ MNPQ ,

**Option ID :- 152,**

**Answer Given by Candidate:-** ZADE , **Option ID : -149**

**Section : Generic, Q39**

**Question ID:- 39**

A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series  
361,   , 169, 121, 49, 25.

**Options:-**

■ 289 ,

**Option ID :- 153,**

■ 256 ,

**Option ID :- 154,**

■ 196 ,

**Option ID :- 155,**

■ 324 ,

**Option ID :- 156,**

**Answer Given by Candidate:- 256 , Option ID : -154**

**Correct Answer :- 289      Option ID :- 153**

**Section : Generic, Q40**

**Question ID:- 40**

FAK, IEM, LIO, ?

**Options:-**

■ MNO ,

**Option ID :- 157,**

■ NOP ,

**Option ID :- 158,**

■ OPO ,

**Option ID :- 159,**

■ OMQ ,

**Option ID :- 160,**

**Answer Given by Candidate:- OMQ , Option ID : -160**

**Correct Answer :- OMQ      Option ID :- 160**

**Section : Generic, Q41**

**Question ID:- 41**

Select the set in which numbers are related in the same way as are the numbers of the following set:

Given set: (39, 784, 17) (14, 400, 26)

**Options:-**

■ (54, 256, 13) ,

**Option ID :- 161,**

■ (20, 676, 32) ,

**Option ID :- 162,**

(19, 282, 28)

■ **Option ID :- 163,**

(17, 144, 77)

■ **Option ID :- 164,**

**Answer Given by Candidate:-** (20, 676, 32) , **Option ID : -162**

**Correct Answer :-** (20, 676, 32) **Option ID :- 162**

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### **Section : Generic, Q42**

#### **Question ID:- 42**

In a certain code language, "FLUTE" is written as "UOFGV". How is "LAMPS" written in that code language?

#### **Options:-**

ONKPT

■ **Option ID :- 165,**

OZNPS

■ **Option ID :- 166,**

OSNPZ

■ **Option ID :- 167,**

OZNKH

■ **Option ID :- 168,**

**Answer Given by Candidate:-** OZNKH , **Option ID : -168**

**Correct Answer :-** OZNKH **Option ID :- 168**

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### **Section : Technical, Q43**

#### **Question ID:- 43**

5 persons A, B, C, D, and E are in queue of a shop the probability that A and E always occur together is:

#### **Options:-**

$\frac{1}{4}$

■ **Option ID :- 169,**

$\frac{2}{3}$

■ **Option ID :- 170,**

$\frac{2}{5}$

■ **Option ID :- 171,**

$\frac{3}{5}$

■ **Option ID :- 172,**

$\frac{3}{5}$

**Answer Given by Candidate:-** , **Option ID : -172**

$\frac{2}{5}$

**Correct Answer :-**  $\frac{2}{5}$  **Option ID :- 171**

---

### **Section : Technical, Q44**

#### **Question ID:- 44**

A man is dealt 4 spade cards from an ordinary deck of 52 cards if he is given five more what is the probability that none of them are spades:

**Options:-**

$$\frac{^{39}C_1}{^{48}C_5}$$

**Option ID :- 173,**

$$\frac{^{39}C_2}{^{48}C_5}$$

**Option ID :- 174,**

$$\frac{^{39}C_3}{^{48}C_5}$$

**Option ID :- 175,**

$$\frac{^{39}C_4}{^{48}C_5}$$

**Option ID :- 176,**

$$\frac{^{39}C_5}{^{48}C_5}$$

**Answer Given by Candidate:- , Option ID : -176**

$$\frac{^{39}C_5}{^{48}C_5}$$

**Correct Answer :- Option ID :- 176**

---

**Section : Technical, Q45**

**Question ID:- 45**

In eight throws of a dice 1 or 3 is considered a success. Then, the standard deviation of success is:

**Options:-**

$$\frac{16}{9}$$

**Option ID :- 177,**

$$\frac{3}{9}$$

**Option ID :- 178,**

$$\frac{4}{3}$$

**Option ID :- 179,**

$$\frac{2}{3}$$

**Option ID :- 180,**

$$\frac{2}{3}$$

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

$$\frac{4}{3}$$

**Correct Answer :- Option ID :- 179**

---

**Section : Technical, Q46**

**Question ID:- 46**

Suppose a Poisson probability distribution, mean = 5.1 provides a good approximation of the distribution of a random variable  $X$ . The standard deviation for  $X$  is:

**Options:-**

■ 2.6  
■ Option ID :- 181,

■ 5.1

■ Option ID :- 182,

■  $\sqrt{5.1}$

■ Option ID :- 183,

■ 26.01

■ Option ID :- 184,

Answer Given by Candidate:- 26.01 , Option ID : -184

Correct Answer :-  $\sqrt{5.1}$  Option ID :- 183

---

## Section : Technical, Q47

### Question ID:- 47

In regression analysis, the variable that is being predicted is the \_\_\_\_\_.

#### Options:-

■ response or dependent variable

■ Option ID :- 185,

■ independent variable

■ Option ID :- 186,

■ intervening variable

■ Option ID :- 187,

■ is usually x

■ Option ID :- 188,

Answer Given by Candidate:- is usually x , Option ID : -188

Correct Answer :- response or dependent variable Option ID :- 185

---

## Section : Technical, Q48

### Question ID:- 48

In a regression analysis if SSE = 200 and SSR = 300, then the coefficient of determination is:

#### Options:-

■ 0.6667

■ Option ID :- 189,

■ 0.6000

■ Option ID :- 190,

■ 0.4000

■ Option ID :- 191,

■ 1.5000

■ Option ID :- 192,

■ 1.5000

Answer Given by Candidate:- 1.5000 , Option ID : -192

Correct Answer :- 0.6000 Option ID :- 190

---

## Section : Technical, Q49

### Question ID:- 49

Larger values of  $r^2(R^2)$  imply that the observations are more closely grouped about the \_\_\_\_\_

#### Options:-

- average value of the independent variables

#### Option ID :- 193,

- average value of the dependent variable

#### Option ID :- 194,

- least squares line

#### Option ID :- 195,

- origin

#### Option ID :- 196,

**Answer Given by Candidate:-** origin , **Option ID : -196**

**Correct Answer :-** least squares line **Option ID :- 195**

---

### Section : Technical, Q50

#### Question ID:- 50

Which of the following statement is not true?

#### Options:-

If  $A$ ,  $G$  and  $H$  be the arithmetic mean, geometric mean and harmonic mean respectively of two positive numbers  $a$  and  $b$ , then  $A \geq G \geq H$

#### Option ID :- 197,

$$\text{Mean} - \text{Mode} = \frac{1}{3}(\text{Mean} - \text{Median})$$

#### Option ID :- 198,

The sum of squares of deviations of set of values is minimum, when deviation taken from arithmetic mean.

#### Option ID :- 199,

The sum of absolute deviations of set of values is minimum, when deviation taken from median.

#### Option ID :- 200,

The sum of absolute deviations of set of values is minimum, when deviation taken from median.

**Answer Given by Candidate:-**

, **Option ID : -200**

$$\text{Mean} - \text{Mode} = \frac{1}{3}(\text{Mean} - \text{Median})$$

**Correct Answer :-**

**Option ID :- 198**

---

### Section : Technical, Q51

#### Question ID:- 51

Let a discrete random variable  $X$  has the distribution:

$$P(X=0) = P(X=2) = p, P(X=1) = 1-2p, \text{ for } 0 \leq p \leq \frac{1}{2}$$

Maximum variance of  $X$  of the given distribution is:

#### Options:-

- 2

#### Option ID :- 201,

■ 1 ,  
**Option ID :- 202,**  
■ 2 ,  
■ 3 ,  
■ 4 ,

**Option ID :- 203,**  
■ 1 ,  
■ 2 ,  
■ 3 ,  
**Option ID :- 204,**  
■ 4 ,

**Answer Given by Candidate:-**  $\frac{3}{4}$ , **Option ID : -204**

**Correct Answer :-** 1 **Option ID :- 202**

---

### **Section : Technical, Q52**

#### **Question ID:- 52**

In a normal population with mean 15 and standard deviation 1.5. It is known that 320 observations exceed 16.5. Find total number of observations (approximately) if  $P(|z| < 1) = 0.68$ .

#### **Options:-**

■ 2000 ,  
**Option ID :- 205,**  
■ 941 ,

■ 470 ,  
**Option ID :- 206,**  
■ 1000 ,

■ 1000 ,  
**Option ID :- 207,**  
■ 1000 ,  
**Option ID :- 208,**

**Answer Given by Candidate:-** 1000, **Option ID : -208**

**Correct Answer :-** 2000 **Option ID :- 205**

---

### **Section : Technical, Q53**

#### **Question ID:- 53**

Any signed negative binary number is recognized by its \_\_\_\_\_.

#### **Options:-**

■ MSB ,  
**Option ID :- 209,**  
■ LSB ,

■ Byte ,  
**Option ID :- 210,**  
■ Nibble ,

■ Nibble ,  
**Option ID :- 211,**  
■ Nibble ,  
**Option ID :- 212,**

**Answer Given by Candidate:-** MSB, **Option ID : -209**

**Correct Answer :-** MSB **Option ID :- 209**

---

### **Section : Technical, Q54**

### **Question ID:- 54**

In context of Boolean Algebra, the function,  $F(W, X, Y, Z) = (W+X)(W+Y)(W+Z)$  after minimization is:

#### **Options:-**

- $W + XYZ$ ,

**Option ID :- 213,**

- $WX + YZ$ ,

**Option ID :- 214,**

- $WZ + XY$ ,

**Option ID :- 215,**

- $WY + XZ$ ,

**Option ID :- 216,**

**Answer Given by Candidate:-**   $W + XYZ$ , **Option ID : -213**

**Correct Answer :-**   $W + XYZ$  **Option ID :- 213**

---

### **Section : Technical, Q55**

#### **Question ID:- 55**

In a 2-variable Karnaugh Map, how many cells does it have?

#### **Options:-**

- 4 ,

**Option ID :- 217,**

- 8 ,

**Option ID :- 218,**

- 16 ,

**Option ID :- 219,**

- 32 ,

**Option ID :- 220,**

**Answer Given by Candidate:-**  4 , **Option ID : -217**

**Correct Answer :-**  4 **Option ID :- 217**

---

### **Section : Technical, Q56**

#### **Question ID:- 56**

What is the primary function of a multiplexer (MUX)?

#### **Options:-**

- Addition ,

**Option ID :- 221,**

- Multiplication ,

**Option ID :- 222,**

- Data selection ,

**Option ID :- 223,**

- Data storage ,

**Option ID :- 224,**

**Answer Given by Candidate:-**  Data selection , **Option ID : -223**

**Correct Answer :-**  Data selection **Option ID :- 223**

## Section : Technical, Q57

### Question ID:- 57

In S-R flip-flop, if Q = 0 the output is said to be \_\_\_\_\_.

#### Options:-

▪ Reset ,

**Option ID :- 225,**

▪ Set ,

**Option ID :- 226,**

▪ Previous State ,

**Option ID :- 227,**

▪ Current State ,

**Option ID :- 228,**

**Answer Given by Candidate:-** Reset , **Option ID : -225**  
**Correct Answer :-** Reset **Option ID :- 225**

---

## Section : Technical, Q58

### Question ID:- 58

What is the primary purpose of a modulo-N counter in digital circuits?

#### Options:-

▪ Store data ,

**Option ID :- 229,**

▪ Perform arithmetic operations ,

**Option ID :- 230,**

▪ Count from 0 to N-1 ,

**Option ID :- 231,**

▪ Implement logical functions ,

**Option ID :- 232,**

**Answer Given by Candidate:-** Count from 0 to N-1 , **Option ID : -231**  
**Correct Answer :-** Count from 0 to N-1 **Option ID :- 231**

---

## Section : Technical, Q59

### Question ID:- 59

Which technique is used to transfer data directly between memory and I/O devices without involving the CPU?

#### Options:-

▪ I/O mapping ,

**Option ID :- 233,**

▪ Interrupt handling ,

**Option ID :- 234,**

▪ Direct Memory Access (DMA) ,

**Option ID :- 235,**

▪ Polling ,

**Option ID :- 236,**

**Answer Given by Candidate:-** Direct Memory Access (DMA) , **Option ID : -235**

**Correct Answer :-** Direct Memory Access (DMA) **Option ID :- 235**

## Section : Technical, Q60

### Question ID:- 60

Which of the following is the fastest memory?

#### Options:-

■ Secondary memory ,

**Option ID :- 237,**

■ Cache memory ,

**Option ID :- 238,**

■ Auxiliary memory ,

**Option ID :- 239,**

■ none of the above ,

**Option ID :- 240,**

**Answer Given by Candidate:-** Cache memory , **Option ID : -238**

**Correct Answer :-** Cache memory **Option ID :- 238**

## Section : Technical, Q61

### Question ID:- 61

In a load-store architecture, which addressing mode allows you to load a value from memory, modify it, and then store it back into memory, all in a single instruction?

#### Options:-

■ Register addressing ,

**Option ID :- 241,**

■ Indexed addressing ,

**Option ID :- 242,**

■ Immediate addressing ,

**Option ID :- 243,**

■ Memory indirect addressing ,

**Option ID :- 244,**

**Answer Given by Candidate:-** Memory indirect addressing , **Option ID : -244**

**Correct Answer :-** Register addressing **Option ID :- 241**

## Section : Technical, Q62

### Question ID:- 62

In a complex instruction set computer (CISC) architecture, what is the role of the microcode?

#### Options:-

■ Execute arithmetic operations ,

**Option ID :- 245,**

■ Control the sequencing of instructions ,

**Option ID :- 246,**

- Implement branch instructions
  - Perform data transfer between registers
- Option ID :- 247,**

- Option ID :- 248,**

**Answer Given by Candidate:-** Control the sequencing of instructions , **Option ID : -246**

**Correct Answer :-** Control the sequencing of instructions **Option ID :- 246**

---

### Section : Technical, Q63

#### Question ID:- 63

In virtual memory systems, what is the primary purpose of the Translation Lookaside Buffer (TLB)?

#### Options:-

- Cache frequently used data

- Option ID :- 249,**

- Store page tables

- Option ID :- 250,**

- Manage page replacement policies

- Option ID :- 251,**

- Speed up virtual-to-physical address translation

- Option ID :- 252,**

**Answer Given by Candidate:-** Speed up virtual-to-physical address translation , **Option ID : -252**

**Correct Answer :-** Speed up virtual-to-physical address translation **Option ID :- 252**

---

### Section : Technical, Q64

#### Question ID:- 64

A tiny bootstrap loader is situated in \_\_\_\_\_.

#### Options:-

- RAM

- Option ID :- 253,**

- BIOS

- Option ID :- 254,**

- ROM

- Option ID :- 255,**

- Cache

- Option ID :- 256,**

**Answer Given by Candidate:-** ROM , **Option ID : -255**

**Correct Answer :-** ROM **Option ID :- 255**

---

### Section : Technical, Q65

#### Question ID:- 65

Which of the following is performed by ALU?

#### Options:-

- Data manipulation

**Option ID :- 257,**

- Exponential

**Option ID :- 258,**

- Square root

**Option ID :- 259,**

- All the above

**Option ID :- 260,**

**Answer Given by Candidate:-** All the above , **Option ID : -260**

**Correct Answer :-** All the above **Option ID :- 260**

---

## Section : Technical, Q66

### Question ID:- 66

In the context of programming in C, what is the primary advantage of using a function pointer?

#### Options:-

- It allows dynamic function binding at runtime.

**Option ID :- 261,**

- It reduces memory consumption.

**Option ID :- 262,**

- It speeds up function execution.

**Option ID :- 263,**

- It simplifies function definitions.

**Option ID :- 264,**

**Answer Given by Candidate:-** It allows dynamic function binding at runtime. , **Option ID : -261**

**Correct Answer :-** It allows dynamic function binding at runtime. **Option ID :- 261**

---

## Section : Technical, Q67

### Question ID:- 67

In a binary heap, what is the time complexity for inserting a new element?

#### Options:-

- $O(\log n)$

**Option ID :- 265,**

- $O(n)$

**Option ID :- 266,**

- $O(1)$

**Option ID :- 267,**

- $O(n \log n)$

**Option ID :- 268,**

**Answer Given by Candidate:-**  $O(\log n)$  , **Option ID : -265**

**Correct Answer :-**  $O(\log n)$  **Option ID :- 265**

---

## Section : Technical, Q68

### Question ID:- 68

How many stacks are needed to implement a queue? Consider the situation where no other data structure like arrays, linked list is available to you.

#### Options:-

- 1 ,  
**Option ID :- 269,**
- 2 ,  
**Option ID :- 270,**
- 3 ,  
**Option ID :- 271,**
- 4 ,  
**Option ID :- 272,**

**Answer Given by Candidate:- 2 , Option ID : -270**

**Correct Answer :- 2 Option ID :- 270**

---

#### Section : Technical, Q69

##### Question ID:- 69

What is the primary purpose of the **const** keyword in C when used in function parameters?

#### Options:-

- To indicate that the function does not return a value
- ,  
**Option ID :- 273,**
- To specify that the function cannot be called
- ,  
**Option ID :- 274,**
- To declare that the function's parameters cannot be modified within the function
- ,  
**Option ID :- 275,**
- To define a function that can only be called once
- ,  
**Option ID :- 276,**

**Answer Given by Candidate:- To declare that the function's parameters cannot be modified within the function**  
**Option ID : -275**

**Correct Answer :- To declare that the function's parameters cannot be modified within the function**      **Option ID :- 275**

---

#### Section : Technical, Q70

##### Question ID:- 70

The output of the following code is:

```
void main1()
{
    Static int x=100;
    x++;
    printf ("x=%d",x)
}
void main ()
{
    main1();
    main1();
}
```

#### Options:-

- 100,100  
**Option ID :- 277,**

- 101,101 ,  
**Option ID :- 278,**
- 100,101 ,  
**Option ID :- 279,**
- 101,102 ,  
**Option ID :- 280,**

**Answer Given by Candidate:-** 101,102 , **Option ID : -280**

**Correct Answer :-** 101,102 **Option ID :- 280**

---

## Section : Technical, Q71

### Question ID:- 71

After three calls of the C function bang() below, the values of i and j will be \_\_\_\_\_

```
int j = 1;  
bang()  
{ static int i = 0;  
    int j = 0;  
    i++, j++;  
    return(i);  
}
```

#### Options:-

- i=0,j=0 ,  
**Option ID :- 281,**
- i=3,j=3 ,  
**Option ID :- 282,**
- i=3,j=0 ,  
**Option ID :- 283,**
- i=3,j=1 ,  
**Option ID :- 284,**

**Answer Given by Candidate:-** i=3,j=1 , **Option ID : -284**

**Correct Answer :-** i=3,j=1 **Option ID :- 284**

---

## Section : Technical, Q72

### Question ID:- 72

Which of the following C++ features allows a class to inherit members from multiple base classes?

#### Options:-

- Multilevel Inheritance ,  
**Option ID :- 285,**
- Hierarchical Inheritance ,  
**Option ID :- 286,**
- Encapsulation ,  
**Option ID :- 287,**
- Multiple Inheritance ,  
**Option ID :- 288,**

**Answer Given by Candidate:-** Multiple Inheritance , **Option ID : -288**

**Correct Answer :-** Multiple Inheritance **Option ID :- 288**

---

### Section : Technical, Q73

#### Question ID:- 73

In Java, which access modifier allows a class or method to be accessed only within the same package?

#### Options:-

■ private ,  
**Option ID :- 289,**

■ default ,  
**Option ID :- 290,**

■ protected ,  
**Option ID :- 291,**

■ public ,  
**Option ID :- 292,**

**Answer Given by Candidate:-** public , **Option ID : -292**

**Correct Answer :-** default **Option ID :- 290**

---

### Section : Technical, Q74

#### Question ID:- 74

Which of the following is NOT a popular open-source web framework written in PHP?

#### Options:-

■ Laravel ,  
**Option ID :- 293,**

■ Symfony ,  
**Option ID :- 294,**

■ Django ,  
**Option ID :- 295,**

■ CodeIgniter ,  
**Option ID :- 296,**

**Answer Given by Candidate:-** CodeIgniter , **Option ID : -296**

**Correct Answer :-** Django **Option ID :- 295**

---

### Section : Technical, Q75

#### Question ID:- 75

In C++, what is the purpose of the "new" operator?

#### Options:-

■ To allocate memory for a new object on the heap  
**Option ID :- 297,**

■ To create a class  
**Option ID :- 298,**

■ To access the value of a constant  
**Option ID :- 299,**

To perform bitwise operations

**Option ID :- 300,**

**Answer Given by Candidate:-** To create a class , **Option ID : -298**

**Correct Answer :-** To allocate memory for a new object on the heap

**Option ID :- 297**

---

**Section : Technical, Q76**

**Question ID:- 76**

In .NET, what is the purpose of the Global Assembly Cache (GAC)?

**Options:-**

It is a storage location for text files.

**Option ID :- 301,**

It is used to store global variables.

**Option ID :- 302,**

It stores shared assemblies for use by multiple .NET applications.

**Option ID :- 303,**

It is a compiler for C#.

**Option ID :- 304,**

**Answer Given by Candidate:-** It stores shared assemblies for use by multiple .NET applications. , **Option ID : -303**

**Correct Answer :-** It stores shared assemblies for use by multiple .NET applications. **Option ID :- 303**

---

**Section : Technical, Q77**

**Question ID:- 77**

What will be the output of the following code snippet?

```
example = ["Sunday", "Monday", "Tuesday", "Wednesday"];
print(example[-3:-1])
```

**Options:-**

['Monday', 'Tuesday']

**Option ID :- 305,**

['Sunday', 'Monday']

**Option ID :- 306,**

['Tuesday', 'Wednesday']

**Option ID :- 307,**

['Wednesday', 'Monday']

**Option ID :- 308,**

**Answer Given by Candidate:-** ['Monday', 'Tuesday'] , **Option ID : -305**

**Correct Answer :-** ['Monday', 'Tuesday'] **Option ID :- 305**

---

**Section : Technical, Q78**

**Question ID:- 78**

What is the time complexity of the Quick Sort algorithm in the best case?

**Options:-**

$O(n)$

**Option ID :- 309,**

$O(n \log n)$

■ **Option ID :- 310,**

$O(n^2)$

■ **Option ID :- 311,**

$O(\log n)$

■ **Option ID :- 312,**

**Answer Given by Candidate:-**  $O(n)$ , **Option ID : -309**

**Correct Answer :-**  $O(n \log n)$  **Option ID :- 310**

---

## Section : Technical, Q79

### Question ID:- 79

Which algorithm is used to find the strongly connected components in a directed graph?

#### Options:-

■ Depth-First Search (DFS)

■ **Option ID :- 313,**

Prism's Algorithm

■ **Option ID :- 314,**

Dijkstra's algorithm

■ **Option ID :- 315,**

Kruskal's algorithm

■ **Option ID :- 316,**

**Answer Given by Candidate:-** Kruskal's algorithm, **Option ID : -316**

**Correct Answer :-** Depth-First Search (DFS) **Option ID :- 313**

---

## Section : Technical, Q80

### Question ID:- 80

What is the time complexity of the Bellman-Ford algorithm for finding single-source shortest paths in a weighted graph with negative edge weights?

#### Options:-

$O(V)$

■ **Option ID :- 317,**

$O(V^2)$

■ **Option ID :- 318,**

$O(VE)$

■ **Option ID :- 319,**

$O(E)$

■ **Option ID :- 320,**

**Answer Given by Candidate:-**  $O(VE)$ , **Option ID : -319**

**Correct Answer :-**  $O(VE)$  **Option ID :- 319**

---

## Section : Technical, Q81

### Question ID:- 81

Which of the following sorting algorithms provide the best time complexity in the worst-case scenario?

**Options:-**

- Selection sort ,

**Option ID :- 321,**

- Insertion sort ,

**Option ID :- 322,**

- Merge sort ,

**Option ID :- 323,**

- Quick sort ,

**Option ID :- 324,**

**Answer Given by Candidate:-** Merge sort , **Option ID : -323**

**Correct Answer :-** Merge sort **Option ID :- 323**

---

**Section : Technical, Q82****Question ID:- 82**

Which complexity class includes problems that can be solved in polynomial time using a non-deterministic Turing machine?

**Options:-**

- N ,

**Option ID :- 325,**

- NP ,

**Option ID :- 326,**

- NP-hard ,

**Option ID :- 327,**

- NP-complete ,

**Option ID :- 328,**

**Answer Given by Candidate:-** NP-complete , **Option ID : -328**

**Correct Answer :-** NP **Option ID :- 326**

---

**Section : Technical, Q83****Question ID:- 83**

Which algorithm is used to find the maximum flow in a flow network?

**Options:-**

- Dijkstra's algorithm ,

**Option ID :- 329,**

- Kruskal's algorithm ,

**Option ID :- 330,**

- Floyd-Warshall algorithm ,

**Option ID :- 331,**

- Ford-Fulkerson algorithm ,

**Option ID :- 332,**

**Answer Given by Candidate:-** Ford-Fulkerson algorithm , **Option ID : -332**

**Correct Answer :-** Ford-Fulkerson algorithm **Option ID :- 332**

---

**Section : Technical, Q84****Question ID:- 84**

Heap is a \_\_\_\_\_.

**Options:-**

- Complete binary tree ,

**Option ID :- 333,**

- Binary tree ,

**Option ID :- 334,**

- Binary search Tree ,

**Option ID :- 335,**

- None of these ,

**Option ID :- 336,**

**Answer Given by Candidate:-** Complete binary tree , **Option ID : -333**

**Correct Answer :-** Complete binary tree **Option ID :- 333**

---

**Section : Technical, Q85**

**Question ID:- 85**

Which of the following is an example of a greedy algorithm?

**Options:-**

- Quick Sort ,

**Option ID :- 337,**

- Dijkstra's algorithm ,

**Option ID :- 338,**

- Merge Sort ,

**Option ID :- 339,**

- Bellman-Ford algorithm ,

**Option ID :- 340,**

**Answer Given by Candidate:-** Bellman-Ford algorithm , **Option ID : -340**

**Correct Answer :-** Dijkstra's algorithm **Option ID :- 338**

---

**Section : Technical, Q86**

**Question ID:- 86**

The maximum number of edges in 8 node undirected graph without self-loops is \_\_\_\_\_.

**Options:-**

- 45 ,

**Option ID :- 341,**

- 61 ,

**Option ID :- 342,**

- 28 ,

**Option ID :- 343,**

- 17 ,

**Option ID :- 344,**

**Answer Given by Candidate:-** 28 , **Option ID : -343**

**Correct Answer :-** 28 **Option ID :- 343**

## **Section : Technical, Q87**

### **Question ID:- 87**

What is the cardinality ratio in an ER diagram?

#### **Options:-**

- The number of entities in an entity set

#### **Option ID :- 345,**

- The number of attributes in an entity

#### **Option ID :- 346,**

- The maximum number of relationships an entity can have

#### **Option ID :- 347,**

- The maximum number of entity instances that can participate in a relationship

#### **Option ID :- 348,**

**Answer Given by Candidate:-** The maximum number of entity instances that can participate in a relationship

**Option ID : -348**

**Correct Answer :-** The maximum number of entity instances that can participate in a relationship **Option ID :- 348**

---

## **Section : Technical, Q88**

### **Question ID:- 88**

Which SQL command is used to add a new column to an existing table?

#### **Options:-**

- ADD COLUMN

#### **Option ID :- 349,**

- INSERT COLUMN

#### **Option ID :- 350,**

- ALTER TABLE

#### **Option ID :- 351,**

- MODIFY TABLE

#### **Option ID :- 352,**

**Answer Given by Candidate:-** INSERT COLUMN, **Option ID : -350**

**Correct Answer :-** ALTER TABLE **Option ID :- 351**

---

## **Section : Technical, Q89**

### **Question ID:- 89**

What is a key feature of a B+ tree that distinguishes it from a B tree?

#### **Options:-**

- B+ trees are height-balanced

#### **Option ID :- 353,**

- B+ trees store data only in leaf nodes

#### **Option ID :- 354,**

- B+ trees allow duplicates in internal nodes

#### **Option ID :- 355,**

- B+ trees have a fixed branching factor

#### **Option ID :- 356,**

**Answer Given by Candidate:-** B+ trees have a fixed branching factor , **Option ID : -356**

**Correct Answer :-** B+ trees store data only in leaf nodes **Option ID :- 354**

---

## Section : Technical, Q90

### Question ID:- 90

What is a deadlock in the context of database transactions?

#### Options:-

- A situation where a transaction is terminated abruptly

**Option ID :- 357,**

A situation where two or more transactions are waiting for each other to release locks

**Option ID :- 358,**

A situation where a transaction violates integrity constraints

**Option ID :- 359,**

A situation where a transaction is waiting for user input

**Option ID :- 360,**

**Answer Given by Candidate:-** A situation where a transaction is waiting for user input , **Option ID : -360**

**Correct Answer :-** A situation where two or more transactions are waiting for each other to release locks **Option ID :- 358**

---

## Section : Technical, Q91

### Question ID:- 91

Which operation in relational algebra is used to combine rows from two relations, eliminating duplicate rows?

#### Options:-

Union

**Option ID :- 361,**

Join

**Option ID :- 362,**

Intersection

**Option ID :- 363,**

Difference

**Option ID :- 364,**

**Answer Given by Candidate:-** Union , **Option ID : -361**

**Correct Answer :-** Union **Option ID :- 361**

---

## Section : Technical, Q92

### Question ID:- 92

A relation R (E, F, G, H, I, J, K, L, M, N) is given the following functional dependencies  
 $F = \{ (E, F) \rightarrow G, F \rightarrow (I, J), (E, H) \rightarrow (K, L), K \rightarrow M, L \rightarrow N \}$ . Which is the key for R?

#### Options:-

{E, F}

**Option ID :- 365,**

{E, F, H}

**Option ID :- 366,**

{E,H}

■ **Option ID :- 367,**

{E,F,H,K,L}

■ **Option ID :- 368,**

**Answer Given by Candidate:- {E,F,H,K,L} , Option ID : -368**

**Correct Answer :- {E,F,H} Option ID :- 366**

---

### Section : Technical, Q93

**Question ID:- 93**

What is the purpose of an associative entity in an ER diagram?

**Options:-**

■ To represent a many-to-many relationship

■ **Option ID :- 369,**

To enhance the readability of the diagram

■ **Option ID :- 370,**

To represent a primary key attribute

■ **Option ID :- 371,**

To indicate a one-to-one relationship

■ **Option ID :- 372,**

**Answer Given by Candidate:- To indicate a one-to-one relationship , Option ID : -372**

**Correct Answer :- To represent a many-to-many relationship Option ID :- 369**

---

### Section : Technical, Q94

**Question ID:- 94**

In the context of lexical analysis, what is the purpose of a lexer or lexical analyzer?

**Options:-**

■ Parsing source code

■ **Option ID :- 373,**

Generating machine code

■ **Option ID :- 374,**

Tokenizing source code

■ **Option ID :- 375,**

Optimizing code

■ **Option ID :- 376,**

**Answer Given by Candidate:- Tokenizing source code , Option ID : -375**

**Correct Answer :- Tokenizing source code Option ID :- 375**

---

### Section : Technical, Q95

**Question ID:- 95**

In syntax-directed translation, what is the purpose of semantic actions?

**Options:-**

■ To generate intermediate code

■ **Option ID :- 377,**

- To create a parse tree

**Option ID :- 378,**

- To perform additional tasks associated with the production rules

**Option ID :- 379,**

- To optimize code

**Option ID :- 380,**

**Answer Given by Candidate:-** To perform additional tasks associated with the production rules , **Option ID :- 379**

**Correct Answer :-** To perform additional tasks associated with the production rules **Option ID :- 379**

---

## Section : Technical, Q96

**Question ID:- 96**

Which of the following is not a type of optimization in code generation?

**Options:-**

- Loop optimization

**Option ID :- 381,**

- Register allocation

**Option ID :- 382,**

- Dead code elimination

**Option ID :- 383,**

- Syntax analysis

**Option ID :- 384,**

**Answer Given by Candidate:-** Syntax analysis , **Option ID :-384**

**Correct Answer :-** Syntax analysis **Option ID :- 384**

---

## Section : Technical, Q97

**Question ID:- 97**

In the context of assemblers, what is the purpose of the second pass?

**Options:-**

- Translating high-level code

**Option ID :- 385,**

- Generating machine code

**Option ID :- 386,**

- Tokenizing source code

**Option ID :- 387,**

- Parsing source code

**Option ID :- 388,**

**Answer Given by Candidate:-** Generating machine code , **Option ID :-386**

**Correct Answer :-** Generating machine code **Option ID :- 386**

---

## Section : Technical, Q98

**Question ID:- 98**

A program has 4 page frames numbered from 0 to 3. If the pages are reference in the order {A,B,A,D,B,C,D,E,F,A,A,G,C,F,G}. Consider a demand paging system and LRU as a Page replacement policy then the number of page faults are:

**Options:-**

- 9 ,  
**Option ID :- 389,**
- 6 ,  
**Option ID :- 390,**
- 7 ,  
**Option ID :- 391,**
- 8 ,  
**Option ID :- 392,**

**Answer Given by Candidate:- 9 , Option ID : -389**

**Correct Answer :- 9 Option ID :- 389**

---

**Section : Technical, Q99**

**Question ID:- 99**

An individual token is called \_\_\_\_\_.

**Options:-**

- Lex ,  
**Option ID :- 393,**
- Lexeme ,  
**Option ID :- 394,**
- Both Lex and Lexeme ,  
**Option ID :- 395,**
- None of these ,  
**Option ID :- 396,**

**Answer Given by Candidate:- Lexeme , Option ID : -394**

**Correct Answer :- Lexeme Option ID :- 394**

---

**Section : Technical, Q100**

**Question ID:- 100**

The principle of Locality of reference justifies the use of:

**Options:-**

- Virtual memory ,  
**Option ID :- 397,**
- Interrupts ,  
**Option ID :- 398,**
- Cache memory ,  
**Option ID :- 399,**
- Secondary memory ,  
**Option ID :- 400,**

**Answer Given by Candidate:- Cache memory , Option ID : -399**

## Section : Technical, Q101

### Question ID:- 101

Which project management technique is used to depict the sequence of activities in a project and their dependencies?

#### Options:-

- PERT (Program Evaluation and Review Technique)

**Option ID :- 401,**

- SWOT analysis

**Option ID :- 402,**

- Gantt chart

**Option ID :- 403,**

- Critical Path Method (CPM)

**Option ID :- 404,**

**Answer Given by Candidate:-** Critical Path Method (CPM) , **Option ID : -404**

**Correct Answer :-** Critical Path Method (CPM) **Option ID :- 404**

---

## Section : Technical, Q102

### Question ID:- 102

Which of the following is a key component of the Waterfall project management methodology?

#### Options:-

- Iterative development

**Option ID :- 405,**

- Continuous integration

**Option ID :- 406,**

- Sequential phases

**Option ID :- 407,**

- Agile principles

**Option ID :- 408,**

**Answer Given by Candidate:-** Continuous integration , **Option ID : -406**

**Correct Answer :-** Sequential phases **Option ID :- 407**

---

## Section : Technical, Q103

### Question ID:- 103

In project management, what is the critical path?

#### Options:-

- The longest path in the project network diagram

**Option ID :- 409,**

- The path with the most activities

**Option ID :- 410,**

- The path that requires the least resources

**Option ID :- 411,**

The path with the fewest dependencies

**Option ID :- 412,**

**Answer Given by Candidate:-**

The path with the fewest dependencies

, Option ID : -412

**Correct Answer :-**

The longest path in the project network diagram

**Option ID :- 409**

---

## Section : Technical, Q104

**Question ID:- 104**

Which of the following is a commonly used software development life cycle model that emphasizes short, iterative development cycles?

**Options:-**

Waterfall model

**Option ID :- 413,**

Spiral model

**Option ID :- 414,**

Agile model

**Option ID :- 415,**

V-Model

**Option ID :- 416,**

**Answer Given by Candidate:-** Agile model , Option ID : -415

**Correct Answer :-** Agile model **Option ID :- 415**

---

## Section : Technical, Q105

**Question ID:- 105**

What is the primary objective of system testing?

**Options:-**

Testing individual components of the system

**Option ID :- 417,**

Validating the system's functionality as a whole

**Option ID :- 418,**

Debugging the code

**Option ID :- 419,**

Creating project documentation

**Option ID :- 420,**

**Answer Given by Candidate:-** Validating the system's functionality as a whole , Option ID : -418

**Correct Answer :-** Validating the system's functionality as a whole **Option ID :- 418**

---

## Section : Technical, Q106

**Question ID:- 106**

What is the primary goal of a Fishbone (Ishikawa) diagram in the context of project management?

**Options:-**

Identifying the critical path

**Option ID :- 421,**

■ Analyzing the root causes of a problem

**Option ID :- 422,**

■ Creating project schedules

**Option ID :- 423,**

■ Managing project resources

**Option ID :- 424,**

**Answer Given by Candidate:-** Managing project resources , **Option ID : -424**

**Correct Answer :-** Analyzing the root causes of a problem **Option ID :- 422**

---

### **Section : Technical, Q107**

**Question ID:- 107**

In the context of congestion control, what is RED?

**Options:-**

■ Random Early Detection

**Option ID :- 425,**

■ Redundant Error Detection

**Option ID :- 426,**

■ Reliable Data Transmission

**Option ID :- 427,**

■ Rapid Error Detection

**Option ID :- 428,**

**Answer Given by Candidate:-** Redundant Error Detection , **Option ID : -426**

**Correct Answer :-** Random Early Detection **Option ID :- 425**

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### **Section : Technical, Q108**

**Question ID:- 108**

Which transport protocol provides a connectionless, unreliable service?

**Options:-**

■ TCP

**Option ID :- 429,**

■ UDP

**Option ID :- 430,**

■ IP

**Option ID :- 431,**

■ ICMP

**Option ID :- 432,**

**Answer Given by Candidate:-** ICMP , **Option ID : -432**

**Correct Answer :-** UDP **Option ID :- 430**

---

### **Section : Technical, Q109**

**Question ID:- 109**

Which device operates at the Data Link Layer and makes forwarding decisions based on MAC addresses?

**Options:-**

- Hub ,  
**Option ID :- 433,**
- Switch ,  
**Option ID :- 434,**
- Router ,  
**Option ID :- 435,**
- Gateway ,  
**Option ID :- 436,**

**Answer Given by Candidate:-** Gateway, **Option ID : -436**

**Correct Answer :-** Switch **Option ID :- 434**

---

### **Section : Technical, Q110**

#### **Question ID:- 110**

Which type of cryptography uses a single key for both encryption and decryption?

#### **Options:-**

- Public Key Cryptography ,

**Option ID :- 437,**

- Private Key Cryptography ,

**Option ID :- 438,**

- Symmetric Key Cryptography ,

**Option ID :- 439,**

- Asymmetric Key Cryptography ,

**Option ID :- 440,**

**Answer Given by Candidate:-** Asymmetric Key Cryptography, **Option ID : -440**

**Correct Answer :-** Symmetric Key Cryptography **Option ID :- 439**

---

### **Section : Technical, Q111**

#### **Question ID:- 111**

Which network security concept aims to deceive and track potential attackers by simulating vulnerable systems?

#### **Options:-**

- Firewall ,

**Option ID :- 441,**

- Intrusion Detection System ,

**Option ID :- 442,**

- Honey Pot ,

**Option ID :- 443,**

- Smart Card ,

**Option ID :- 444,**

**Answer Given by Candidate:-** Smart Card, **Option ID : -444**

**Correct Answer :-** Honey Pot **Option ID :- 443**

---

### **Section : Technical, Q112**

#### **Question ID:- 112**

Which routing algorithm is based on link-state information and calculates the shortest path using Dijkstra's algorithm?

**Options:-**

■ RIP  
■ Option ID :- 445,

■ OSPF  
■ Option ID :- 446,

■ BGP  
■ Option ID :- 447,

■ EIGRP  
■ Option ID :- 448,

**Answer Given by Candidate:-** EIGRP , **Option ID : -448**

**Correct Answer :-** OSPF    **Option ID :- 446**

---

**Section : Technical, Q113**

**Question ID:- 113**

Which type of cryptography uses different keys for encryption and decryption?

**Options:-**

■ Public Key Cryptography  
■ Option ID :- 449,

■ Private Key Cryptography  
■ Option ID :- 450,

■ Symmetric Key Cryptography  
■ Option ID :- 451,

■ Asymmetric Key Cryptography  
■ Option ID :- 452,

**Answer Given by Candidate:-** Asymmetric Key Cryptography , **Option ID : -452**

**Correct Answer :-** Asymmetric Key Cryptography    **Option ID :- 452**

---

**Section : Technical, Q114**

**Question ID:- 114**

In the context of wireless networks, what is the primary purpose of a WEP key?

**Options:-**

■ To encrypt voice calls  
■ Option ID :- 453,

■ To authenticate devices on the network  
■ Option ID :- 454,

■ To secure Wi-Fi connections  
■ Option ID :- 455,

■ To amplify the wireless signal  
■ Option ID :- 456,

**Answer Given by Candidate:-** To secure Wi-Fi connections , **Option ID : -455**

**Correct Answer :-** To secure Wi-Fi connections **Option ID :- 455**

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## Section : Technical, Q115

### Question ID:- 115

Which of the following is not an application layer protocol?

#### Options:-

■ , **FTP**

■ , **Option ID :- 457,**

DNS

■ , **Option ID :- 458,**

SMTP

■ , **Option ID :- 459,**

PSTM

■ , **Option ID :- 460,**

**Answer Given by Candidate:-** DNS , **Option ID : -458**

**Correct Answer :-** PSTM **Option ID :- 460**

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## Section : Technical, Q116

### Question ID:- 116

Which HTML5 attribute is used to specify the URL of an image to be displayed when the primary image is unavailable?

#### Options:-

■ , alt

■ , **Option ID :- 461,**

src

■ , **Option ID :- 462,**

fallback

■ , **Option ID :- 463,**

placeholder

■ , **Option ID :- 464,**

**Answer Given by Candidate:-** placeholder , **Option ID : -464**  
**Correct Answer :-** src **Option ID :- 462**

---

## Section : Technical, Q117

### Question ID:- 117

Which web server software is often used in conjunction with PHP and MySQL for web application development?

#### Options:-

■ , Apache

■ , **Option ID :- 465,**

Nginx

■ , **Option ID :- 466,**

Tomcat

■ , **Option ID :- 467,**

■ **Option ID :- 468,**

**Answer Given by Candidate:- IIS , Option ID : -468**

**Correct Answer :- Apache Option ID :- 465**

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### **Section : Technical, Q118**

**Question ID:- 118**

Which HTML tag is used to declare internal CSS?

**Options:-**

■ <link>

■ **Option ID :- 469,**

<style>

■ **Option ID :- 470,**

<script>

■ **Option ID :- 471,**

None of these

■ **Option ID :- 472,**

**Answer Given by Candidate:- <style> , Option ID : -470**

**Correct Answer :- <style> Option ID :- 470**

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### **Section : Technical, Q119**

**Question ID:- 119**

The CSS property used to specify the transparency of an element is:

**Options:-**

■ Visibility

■ **Option ID :- 473,**

filter

■ **Option ID :- 474,**

Transparency

■ **Option ID :- 475,**

opacity

■ **Option ID :- 476,**

**Answer Given by Candidate:- opacity , Option ID : -476**

**Correct Answer :- opacity Option ID :- 476**

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### **Section : Technical, Q120**

**Question ID:- 120**

XML is designed to \_\_\_\_\_ and \_\_\_\_\_ data.

**Options:-**

■ Design, style

■ **Option ID :- 477,**

design, send

■ **Option ID :- 478,**

■ Store, transport ,  
**Option ID :- 479,**

■ store, manipulate ,  
**Option ID :- 480,**

**Answer Given by Candidate:-** store, manipulate , **Option ID : -480**

**Correct Answer :-** Store, transport **Option ID :- 479**

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