

Section 1 - Cognitive

Section Summary

- No. of Questions: 50
- Duration: 50 min

Additional Instructions:

None

Q1.

The present age of a father is 3 years more than three times the age of his son. Three years hence, father's age will be 10 years more than twice the age of the son. Find the present age of the father.

30 years

32 years

33 years

40 years

Q2.

Father is 5 years older than the mother and the mother's age now is thrice the age of the daughter. The daughter is now 10 years old. What was the father's age when the daughter was born?

20 years

15 years

25 years

30 years

Q3.

In a regular week, there are 5 working days and for each day, the working hours are 8. A man gets Rs. 2.40 per hour for regular work and Rs. 3.20 per hour for overtime. If he earns Rs. 432 in 4 weeks, then how many hours does he work for?

160

175

180

195

Q4.

A sum of Rs. 1360 has been divided among A, B and C such that A gets $\frac{2}{3}$ of what B gets and B gets $\frac{1}{4}$ of what C gets. B's share is

Rs.120

Rs.160

Rs.240

Rs.300

Q5.

The speed of a boat in still water is 40 kmph. The time taken by the boat to cover 240 km in upstream is 5 hours more than to cover the 420 km in downstream. Find the speed of the stream.

15 kmph

20 kmph

25 kmph

30 kmph

Q6.

A man can row 48 km upstream and 56 km downstream in 12 hrs. Also, he can row 54 km upstream and 70 km downstream in 14 hrs. What is the speed of man in still water?

8 km/hr

10 km/hr

12 km/hr

14 km/hr

Q7.

A man offers 2 flowers on even days, 3 flowers on odd days divisible by 3 and offers 2 extra flowers on the days divisible by 5. How many flowers did he offer in April 1984?

87

88

89

None of these

Q8.

Find the least number, which when divided by 12 leaves a remainder of 10, when divided by 18 a remainder of 16 and when divided by 32 a remainder of 30.

288

290

286

292

Q9.

A company could advertise its new product in 5 magazines, 4 newspapers, and 3 television channels. But in a later move, it decided to give advertisements in only 2 of the magazines, one of the newspapers and one of the TV channel. In how many ways can they advertise?

36

44

72

120

Q10.

In how many ways 4 boys and 3 girls can be seated in a row so that they are alternate.

144

288

12

256

Q11.

Pipe X fills a tank in 36 minutes and Y in 60 minutes. Pipe Z empties the tank in 24 minutes. Find the time taken to fill $(5/12)^{\text{th}}$ of the tank if all three pipes are opened together.

120 minutes

150 minutes

100 minutes

90 minutes

Q12.

Two pipes can fill a tank in 6 hours and 8 hours. While a third pipe empties the full tank in 12 hours. If all the three pipes operate simultaneously, in how much time will the tank be filled?

4 hours

4 hours 48min

5 hours

5 hours 48min

Q13.

Profit earned by selling an article for Rs. 1450 is same as the loss incurred by selling the article for Rs. 1280. What is the cost price of the article?

1385

1405

1355
1365

Q14.

A trader allows a discount of 5% to his customers. What price should he mark on an article the cost price of which is Rs.712.50 so as to, make a clear profit of $33\frac{1}{3}\%$ on his outlay?

800
1000
950
933

Q15.

Kavin needs to find the simple interest on for 7% per annum for Rs. 800 and on Rs. 700 at 16% p.a. and on Rs. 500 at 4% p.a. for 2 years. The interest is _____.

Rs. 376
Rs. 435
Rs. 192
Rs. 296

Q16.

Find the missing term
FU, KP, PK, ?

UG
VR
UF
GS

Q17.

Select the related letters from the given alternatives.
HEATER: KBDOHO:: COOLER: ?

ALRHV
FLRIHO
FLIRHO
FRLIHO

Q18.

Pointing to a photograph Smita says, “This man’s son’s sister is my mother-in-law.” How is the woman’s husband related to the man in the photograph?

- Son
- Nephew
- Grandson
- Son-in-law

Q19.

Study the following information and answer the given questions.

D is the father of A. D is married to P. P is the mother of J. P has only one daughter. J is married to U. U is the son of L.

How is J related to D ?

- Daughter
- Granddaughter
- Niece
- Daughter-in-law

Q20.

If VICTORY is coded as YLFWRUB, how can SUCCESS be coded?

- VXEEIVV
- VXFFHVV
- VYEFIVV
- VXFFIVV

Q21.

For the following question, choose the best option.

'Disease' is related to 'Medicine' in the same way as 'Famine' is related to

- Drought
- River
- Rainfall
- Waterfall

Q22.

When the given figure is folded to form a cube then which face is opposite to the face with 2?

- 4

2
5
1

Q23.

You are given three positions of dice then which face is opposite to the face with alphabet B?

E
I
F
None of these

Q24.

The question below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the questions. Read both the statements and give an answer.

Chandra and Mauli's income is in the ratio of 4:3. What is the income of Chandra?

I. Mauli's income is 75% of Chandra's.

II. Mauli's income is Rs. 4500.

If the data in Statement I alone are sufficient to answer the question, while the
data in Statement II alone are not sufficient to answer the question
If the data in Statement II alone are sufficient to answer the question, while the
data in Statement I alone are not sufficient to answer the question.
If the data in Statement I alone or in Statement II alone are sufficient to answer
the question.
If the data in both Statements I and II are not sufficient to answer the question.

Q25.

The question below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statement(s) is/are sufficient to answer the question. Read both the statements and give an answer.

Who is taller among P, Q, R, S & T?

I) S is shorter than Q. P is shorter than only T.

II) Q is taller than only S. T is taller than P and R.

If data in the statement I alone is sufficient to answer the question.
--

If data in the statement II alone is sufficient to answer the question.

If data either in the statement I alone or statement II alone are sufficient to answer the question.

If data given in both I & II together are not sufficient to answer the question.

If data in both statements I & II together are necessary to answer the question.

Q26.

Complete the series:

210, 209, 213, 186, 202, ?

138

77

177

187

Q27.

Find the missing terms

121 : 14641 :: 221 : _____

48841

49094

36303

30363

Q28.

Let S be the set of five digit numbers formed by the digits 1, 2, 3, 4 and 5, using each digit exactly once such that exactly two odd positions are occupied by odd digits. What is the sum of the digits. What is the sum of the digits in the rightmost position of the numbers in S?

228

216

294

192

Q29.

In a row of thirty boys, R is fourth from the right end and W is tenth from the left end. How many boys are there between R and W?

15

16

17

Data inadequate

Q30.

The question given below comprises two statements followed by four conclusions numbered I, II, III and IV. You have to assume both the statements are correct, even if they differ from universally known facts. Go through all the conclusions and then ignoring the universally known facts ascertain as to which of the given conclusions can logically come up from the given statements.

Statements: Some cups are panthers. Some panthers are goats.

Conclusions:

I. Some cups are goats.

II. No cup is goat.

III. All cups are goats.

IV. All goats are cups.

Either I or IV is correct

Either II or IV is correct

Either I or II is correct

None of these

Q31.

Complete the following sentence by choosing the right option.

Please put the plates the table.

over

for

to

on

Q32.

Fill in the blank with right option:

The finance director has come in a lot of criticism over his unsuccessful handling of the company's investments.

back

for

to

on

Q33.

Identify the part of the sentence which is grammatically incorrect

(a) Sita dressed/(b) her absolutely/(c) in informal wear/ (d) on her wedding.

(a)

(b)

(c)

(d)

Q34.

The sentence given below has four parts, indicated by (A), (B), (C) and (D). Read the sentence to find out whether there is any error and mark the part containing the error as the answer. If the sentence has no error, indicate the part (E), which stands for 'No error'. (Ignore the error of punctuation, if any)

A. Tendulkar whom /B. they say /C. is the best batsman /D. India has ever produced. /E. No error.

A

B

C

D

E

Q35.

Click on the word below that is the action verb in the sentence.

Mrs. Zillmer jumped for joy when everyone had their assignment done!

Joy

Assignment

Jumped

Everyone

Q36.

Choose the appropriate option to complete the sentences.

You and _____ brother need to take time to prepare _____ for the long journey which will start next month.

his / yourself

yours / ourselves

their / you

your / yourselves

her / by themselves

Q37.

Choose the word / Phrase to complete the sentence.

The man was sleeping soundly on the river bank. a crocodile was creeping closer.

Despite this

Meanwhile

As a result

By contrast

Q38.

Complete the following sentences with the right option

In the Middle Ages, the ____ of the great cathedrals did not enter into the architects' plans; almost invariably a cathedral was positioned haphazardly in ____ surroundings.

situation - incongruous

location - apt

ambience - salubrious

durability – convenient

Q39.

In the following sentence, a part of the sentence or the whole sentence is underlined. Beneath each sentence, four different ways of phrasing the underlined part are indicated. Choose the best alternative from among the four.

Federal incentives now encourage investing capital in commercial office buildings despite vacancy rates in existing structures that are exceptionally high and no demand for new construction.

capital investment in commercial office buildings, even though vacancy rates in

existing structures are exceptionally high and there is

capital to be invested in commercial office buildings even though there are

exceptionally high vacancy rates high in existing structures with

investing capital in commercial office buildings even though the vacancy rates
are exceptionally high in existing structures with
capital investment in commercial office buildings despite vacancy rates in
existing structures that are exceptionally high, and although there is

Q40.

Read each sentence to find out whether there is any error in it. The error, if any, will be in one part of the sentence. The number of that part is the answer.

It will profit a man nothing 1./ if he was I to gain the world 2/ and lose his own soul.3/no error 4

- | |
|---|
| 1 |
| 2 |
| 3 |
| 4 |

Q41.

Change from Direct speech to indirect speech

Jagdish said, "We passed by a beautiful lake when we went on a trip to Goa."

Jagdish said that they passed by a beautiful lake when they had gone on a trip to
Goa.
Jagdish said that they had passed by a beautiful lake when they went on a trip to
Goa.
Jagdish said that they had passed by a beautiful lake when they had gone on a
trip to Goa.
Jagdish said they passed by a beautiful lake when they went on a trip to Goa.

Q42.

Change from direct speech to indirect speech

He said to them, "Will you listen to such a man?"

He asked them if they will listen to such a man or not.
He asks them whether they will listen to such a man.

He asks them whether they would listen to such a man.

He asked them whether they would listen to such a man.

Q43.

Choose the word that is opposite in meaning to the given words.

Capricious

thoughtful

specious

constant

capacious

Q44.

Select most suitable synonym

yokel

rustic

ignoramus

dandy

recluse

Q45.

From the given options choose the one which best expresses the given sentence in active/passive voice:

Those who worked hard seldom obtained good marks.

Good marks were seldom being obtained by those who worked hard.

Good marks are seldom obtained by those who worked hard.

Seldom had good marks been obtained by those who worked hard.

Good marks were seldom obtained by those who worked hard.

Q46.

From the given options choose the one which best expresses the given sentence in active/passive voice:

They posted all the letters yesterday.

All the letters are to be posted yesterday.

All the letters were to be posted yesterday.

All the letters were posted yesterday.

All the letters was posted yesterday.

Q47.

The following question has a paragraph from which the last sentence has been deleted. From the given options, choose the one that completes the paragraph in the most appropriate way.

Across the border, some leaders of Rwanda and Burundi masterminded the bringing down of the plane carrying their presidents. The tragic incident was then followed by genocide, exterminating Tutsis and moderate Hutus in Rwanda. The two countries were plunged into a political and economic mess

civil war diverted people's energies to war and made political and economic

structures moribund

it was not until 1997 that the rebels seized power ending Mobutu's reign that

was characterized by bloodshed and economic decline

the economy is slowly being revived after Museveni introduced economic

reforms when he seized power in 1987

as Africans tire of war and corrupt leaders, general elections remain the best way

of getting rid of them

Q48.

In the following question, four words are given in bold. One of these words given in bold may be wrongly spelt or inappropriate in the context. Find out that word. If all the words are correct, choose 'All correct' as the answer.

After being **abused** by her (A) husband for many years, Maggie was finally **strong** (B) enough to **absqutulate** from (C) her **bond** of marriage. (D)

A

B

C

D

All correct

Common Content:

The Stratosphere, specifically, the lower Stratosphere has, it seems, been drying out. Water vapour is a greenhouse gas, and the cooling effect on the Earth's climate due to this desiccation may account for a fair bit of the slowdown in the rise of global temperatures seen

over the past ten years. The Stratosphere sits on top of the Troposphere, the lowest, densest layer of the atmosphere. The boundary between the two, the Tropopause, is about 18km above your head if you are in the tropics, and a few kilometres lower if you are at higher latitudes (or up a mountain). In the Troposphere, the air at higher altitudes is in general cooler than the air below it, an unstable situation in which warm and often moist air below is endlessly buoying up into cooler air above. The resultant commotion creates clouds, storms and much of the rest of the world's weather.

In the Stratosphere, the air gets warmer at higher altitudes, which provides stability. The Stratosphere-which extends up to about 55km, where the Mesosphere begins, is made even less weather-prone by the absence of water vapour, and thus of the clouds and precipitation to which it leads. This is because the top of the Troposphere is normally very cold, causing ascending water vapour to freeze into ice crystals that drift and fall, rather than continuing up into the Stratosphere. A little water manages to get past this cold trap. But as Dr. Solomon and her colleagues note, satellite measurements show that rather less has been doing so over the past ten years than was the case previously. Plugging the changes in water vapour into a climate model that looks at the way different substances absorb and emit infrared radiation, they conclude that between 2000 and 2009 a drop in the Stratospheric water vapour of less than one part per million slowed the rate of warming at the Earth's surface by about 25%. Such a small change in Stratospheric water vapour can have such a large effect precisely because the Stratosphere is already dry. It is the relative change in the amount of greenhouse gas, not its absolute level, which determines how much warming it can produce.

Q49.

Why is the situation in the troposphere defined as unstable?

Because, unlike the Stratosphere, there is too much water vapour in the

Troposphere

Because the Troposphere is not directly linked to the Stratosphere, but through

the Tropopause which creates much of the world's weather

Because of the interaction between warm and cool air which is unpredictable in

nature and can lead to storms

Because this layer of the atmosphere is very cloudy and can lead to weather-

related disruptions

Q50.

What in the passage has been cited as the main reason affecting global temperatures?

Relative change in water vapour content in the Stratosphere

Drop in Stratospheric water vapour of less than one part per million

The extreme dryness in the Stratosphere

Absorption and emission of infrared radiation by different substances

Section 2 - Technical MCQ

Section Summary

- No. of Questions: 40
- Duration: 40 min

Additional Instructions:

None

Q1.

Which is not a type of margin?

Top

Left

Right

Center

Q2.

It is possible to _____ a data source before performing a merge.

Modify

Sort

Create

All of the mentioned options

Q3.

What is the default font used in MS Word documents?

Either Times New Roman or Calibri

Arial

Algerian

None of the mentioned options

Q4.

Which menu/group will we use if we want to change the typeface of the selected text?

Edit

View

Format

Tools

Q5.

How to use Format Painter multiple times?

By Click on Lock Format Painter Icon

Format Painter cannot be use multiple times

By Double Click on the Format Painter Icon

None of the mentioned options

Q6.

Can we edit a Macro programmatically after recording it?

Yes

No

Q7.

What is gutter margin?

Margin that is added to right margin when printing

Margin that is added to the left margin when printing

Margin that is added to the outside of the page when printing

Margin that is added to the binding side of page when printing

Q8.

The extensible authentication protocol is an authentication framework frequently used in

Wired local area network

Wired personal area network

Wireless networks

Wired metropolitan area network

Q9.

What is the minimum length of an SSL/TLS certificate's public key that is considered secure for HTTPS connections?

128 bits

256 bits

512 bits

None of the mentioned options

Q10.

What is the purpose of the Multipurpose Internet Mail Extensions (MIME) standard?

To encode binary data for transmission in email messages

To encrypt email messages for security

To authenticate email senders and receivers

To limit the size of email attachments

Q11.

In the layer hierarchy, as the data packet moves from the upper to the lower layers, headers are _____.

Removed

Added

Modified

Rearranged

Q12.

Any part of the graphic that is not included in another hot zone is considered to be part of _____.

rect

default

point

polygon

Q13.

Which of the following is the deployment model?

Public

Private

Hybrid

All of the mentioned options

Q14.

How many types of dimensions exists in Cloud Cube Model?

1

2

3

4

Q15.

How many types of security boundary values exist in Cloud Cube model?

1

- 2
- 3
- none

Q16.

_____ dimension corresponds to two different states in the eight possible cloud forms.

- Physical location of data
- Ownership
- Security boundary
- None of the mentioned options

Q17.

A _____ cloud combines multiple clouds where those clouds retain their unique identities but are bound together as a unit.

- Public
- Private
- Community
- Hybrid

Q18.

Which of the following cloud concept is related to the pooling and sharing of resources?

- Polymorphism
- Abstraction
- Virtualization
- None of the mentioned options

Q19.

What will be the value of t if a = 56 and b = 876?

- 1
- 2
- 3
- 4
- 5
- 6
- 7

8
9

```
Read a,b
Function mul(a, b)
t = 0
while (b != 0)
t = t + a
b=b-1
End While
return t;
End Function
```

490563

49056

490561

None of the mentioned options

Q20.

What is the line number where the elements of array 'a' are swapped?

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21

```
Read size
Read a[1],a[2],...a[size]
i=0
While(i<size)
```

```

j=i+1
While(j<size)
  If a[i] < a[j] then
    t= a[i];
    a[i] = a[j];
    a[j] = t;
  End If
  j=j+1
End While
i=i+1
End While
i=0
While (i<size)
  print a[i]
  i=i+1
End While

```

Line 4

Line 6

Line 7

None of the mentioned options

Q21.

What will be the output of the following program when value=67 and array=[67, 45, 18, 1, 35]?

1
2
3
4
5

```

for each item in the array
  if match item == value
    return the item's location
  end if
end for

```

3

2

1

0

Q22.

What is the output of the following pseudocode?

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11

Set Integer array= {1,3,5,7,8}

Set Integer item = 10

Set Integer k = 3

Set Integer n = 5

Set Integer $j = n$

Set Integer $n = n+1$

```
while(j>=k)
```

```
array[j=1] = array[j]
```

$$j=j-1$$

end-while

```
array[k] = item
```

1 3 5

1 3 5 10 8 0

1,3,7,8

1,3,5,7,8

Q23.

What will happen when the following code executes?

- 1
- 2
- 3
- 4

Set Character array=['A','B','C','D']

```
for m=0 to 3 step 1 do
```

```
display integer(array[i])
```

end-for

All characters of array will be displayed

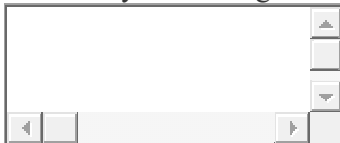
Only three characters of array will be displayed

ASCII values of characters will be displayed

ASCII values of only three characters will be displayed

Q24.

How many interchanges are required to sort the given array [5,1,6,2,4]?



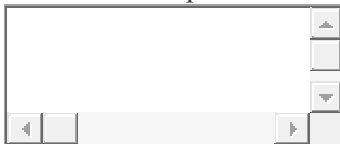
1
2
3
4
5

```
for all elements of array
if array[i]> array[i+1]
swap(array[i], array[i+1])
end if
end f
```

6
8
5
7

Q25.

What is the output of the following pseudocode?



1
2
3
4
5
6
7
8
9
10

Set Integer array a={6,1,9,5,7}

Set Integer array b

6 1 9 1 6
6 5 9 1 6
7 5 9 1 6
6 1 9 5 7

What will the output of the following pseudocode be?

- 1
- 2
- 3
- 4
- 5
- 6

EDOC	
Nothing will be displayed	
Error	
CODE	

What will be the output of the following pseudocode?

The screenshot shows a presentation slide with a large, empty rectangular box in the center. On the right side of the box, there are three small, vertically stacked square buttons with arrows pointing up, down, and left. At the bottom of the slide, there are two small square buttons with arrows pointing left and right, and a larger rectangular button in the center.

- 1
-
- 2

Set Integer array=[2,4,0,1]

Set Integer val=array(1)/array(2)

display val

3

Nothing will be printed

2

Divide by zero exception

Q28.

What will be the output of the following pseudocode?

1
2
3
4
5
6
7
8
9

Set Integer n=1

Set Integer m=0

if (n > 0) then do

if (m > 0) then do

display "Test"

else do

display "Code"

end-if

end-if

Test

Code

Nothing will be displayed

Error

Q29.

What will be the output of the following pseudocode?

	1
	2
	3

for m=10 to 1 step m=m/2 do
display m
End-for

10 5 2 1
10 8 6 4 2
10 6 2
10 8 5 2

Q30.

The pseudocode below sorts an array using bubble sort. Here A is the array and the "n" is the number of elements in it. Function swap exchanges the value of 2 given values.

This function is called with A and 7 as parameters where the array a initially contains the element 64, 34, 25,12, 22, 11, and 9.

What will be the output for the following pseudocode?

	1
	2
	3
	4
	5
	6

```
Function bubblesort(A,n){
  for i=0 to n-2 step 1
    for j =0 n-i-2 step 1
      if (A(j)>A(j+1))
        swap(A(j),A(j+1))
    }
}
```

34 25 12 22 11 9 64
25 12 22 11 9 34 64
11 9 12 22 25 34 64
Nothing will be displayed

Q31.

What will be the output of the following pseudocode?

1
2
3
4
5
6
7

```
integer n, c
set n= 128, c= 4
while( n NOT EQUALS 0)
n= n / 10
c = c - 1
end while
print c
```

5
0
-1
1

Q32.
What will be the output of the following pseudocode?

1
2
3
4

```
Set Integer val=1
Set Integer ans=2
if(val and (ans = val+5))
display "Hello"
```

Hello
3
7
2

Q33.
What will be the output of the following pseudocode?

1
2
3
4
5
6
7
8

```
integer a, b, c
set a= -3, b = -2
if( b - 2 < b)
for (each c from 1 - 1 to 2 - 1)
a= a + 1
end for
end if
print a +b
```

-3

2

3

0

Q34.
What will be the output of the following pseudocode?

1
2
3
4
5
6
7

```
Set Integer a=7
Set Integer b=2
Set Integer m=2
While(--m)
a=a*2
display a
end-while
```

14

0	
	Nothing will be displayed
7	

Q35.

What will be the output of the following pseudocode for n=5?

[illegible]

```
function(input n){
if (n < 2)
return n;
else
return function (n-1) + function(n-2);
}
```

5
0
3
1

Q36.

What will be the output of the following pseudocode?

```
integer a,b,c
set a=1, b=3, c=7
```

```
a= a+b
if(a + b)
if( b + ( c^ a))
a=2
b =a
end if
end if
print a + b +c
```

12

22

11

6

Q37.

_____ helps us to send the same content in a letter to different people at a time.

Mail Merge

Access

Macros

Template

Q38.

When a document is typed using MS Word, the misspelled word can be corrected using the option _____.

Spell Check

Grammar check

Auto correct

Find and replace

Q39.

Shortcut key to move the cursor to the end of the document is _____.

Ctrl + End

Shift + End

Alt +End

Ctrl + home

Q40.

The shortcut key to save and close the current window _____.

Ctrl + W

Alt + W

Alt + W

Ctrl + End

Section 3 - Coding

Section Summary

- No. of Questions: 2
 - Duration: 45 min
- Additional Instructions:**

None

Q1.

Problem statement

Write a function that accepts two integer arrays 'arr1' and 'arr2' of sizes n and m respectively as its argument. Implement the function to find and return the sum of all uncommon elements in two arrays (elements that are present in only one of the arrays).

Note: Return -1 if both arrays are null (None in the case of Python). If one of the arrays is null then return the sum of all elements of the other array

Example

Input:

5
4
9 -4 3 2 -5
2 -5 7 9

Output:

6

Explanation:

Uncommon elements of two arrays are -4, 3, and 7. Sum of uncommon elements = $-4 + 3 + 7 = 6$. Thus, the output is 6.

Input Format

The first line of input consists of the size of the first array, m.

The second line of input consists of the size of the second array, n.

The third line of input consists of m space-separated elements of the first array.

The last line of input consists of n space-separated elements of the first array.

Output Format

The output displays the sum of all uncommon elements in two arrays.

Constraints

$2 \leq m, n \leq 100$

Sample Input Sample Output

```
6
7
2 4 6 7 8 1
1 4 6 3 5 9 11
45
```

Sample Input Sample Output

```
6
7
4 8 3 6 2 7
9 7 4 2 3 5 1
29
```

Sample Input Sample Output

```
5
4
9 -4 3 2 -5
2 -5 7 9
6
```

Time Limit: - ms Memory Limit: - kb Code Size: - kb

Q2.

Problem statement

Write a function that accepts a positive integer array 'price' consisting of 'n' elements as its argument. 'price' contains prices of a share throughout the day in the order of their occurrence. When a new price occurs old price disappears forever. A transaction for the share is complete when firstly the share is bought and then sold. In a transaction where the share is bought at price[j] and sold at price[k], where $j < k$, profit for that transaction = $\text{price}[k] - \text{price}[j]$. you can use a price only once either to buy or sell the share. Implement the function to maximize the profit in at most 2 transactions and return the same. Transaction 2 starts only when transaction 1 is completed.

Note: If 'price' is empty or none in the case of Python, return -1. Return 0, if $n < 2$. All calculations lie within the integer range.

Example

Input:

```
7
2 30 15 10 8 25 80
```

Output:

```
100
```

Explanation:

For transaction 1, the share is bought at 2 and sold at 30. Profit = $30 - 2 = 28$.

For transaction 2, the share is bought at 8 and sold at 80. Profit = $80 - 8 = 72$.

Total profit = transaction 1 profit + transaction 2 profit = $28 + 72 = 100$.

Thus, the output is 100.

Input Format

The first line of input consists of the size of the array, n.

The next line of input consists of n space-separated array elements.

Output Format

The output displays the maximum profit.

Constraints

$1 \leq n \leq 100$

Sample Input Sample Output

7

2 30 15 10 8 25 80

100

Sample Input Sample Output

8

10 5 22 65 8 75 90 80

142

Sample Input Sample Output

7

2 30 15 10 8 25 80

100

Time Limit: - ms Memory Limit: - kb Code Size: - kb

Answer Key & Solution

Section 1 - Cognitive

Q1

33 years

Solution

Let the son's present age be x years.

Then, father's present age = $(3x + 3)$ years

$$(3x + 3 + 3) = 2(x + 3) + 10$$

$$3x + 6 = 2x + 16$$

$$x = 10.$$

Hence, father's present age = $(3x + 3) = ((3 * 10) + 3)$ years = 33 years.

Q2

25 years

Solution

Given: $F = M + 5$,

$M = 3D$,

$D = 10$

$$M = 3 * 10 = 30 \text{ and } F = 30 + 5 = 35$$

The father's age when daughter was born = $35 - 10 = 25$ years.

Q3

175

Solution

Q4

Rs.240

Solution

Q5

20 kmph

Solution

$$240/(40-x) - 420/(40+x) = 5$$

$$x = 20 \text{ kmph}$$

Q6

10 km/hr

Solution

Let upstream speed = x km/hr, downstream speed = y km/hr

So $48/x + 56/y = 12$ And $54/x + 70/y = 14$ Put $1/x = u$, $1/y = v$

So equations are $48u + 56v = 12$ and $54u + 70v = 14$

Solve the equations, $u = 1/6$, $v = 1/14$

So upstream speed = 6 km/hr, downstream speed = 14 km/hr

Speed of boat in still water = $1/2(6+14) = 10$

Q7

None of these

Solution

1984 April contains 30 days.

The no. even days in April = 15

The no. odd days divided by 3 in April = 5

The no. days divided by 5 in April = 5

The total no. of flowers offered = $(15 \times 2) + (5 \times 3) + (5 \times 2) = 55$ flowers.

Q8

286

Solution

The given remainders are each less than their respective divisors by 2

\therefore The required number will be 2 less than the LCM of 12, 18 and 32.

\Rightarrow The required number is $(2 \times 2 \times 9 \times 8) - 2 = 288 - 2 = 286$.

Q9

120

Solution

Choosing 2 magazines out of 5 magazines in 5C_2 ways = 10 ways and choosing 1 newspaper out of 4 newspaper in 4C_1 ways = 4 ways and choosing 1 T.V out of 3 T.V in 3C_1 ways = 3 ways

$$\Rightarrow 10 \times 4 \times 3 = 120$$

Total 120 ways.

Q10

144

Solution

Let the Arrangement be,

B G B G B G B

4 boys can be seated in $4!$ Ways

Girl can be seated in $3!$ Ways

Required number of ways,

$$= 4! \times 3!$$

$$= 144$$

Q11

150 minutes

Solution

X - 36 minutes = 10 units/minute

Y - 60 minutes = 6 units/minute

Z - 24 minutes = (-) 15 units/minute

Total work = 360 units

Total efficiency = 1 unit/minute

Time = $(5/12) (360/1) = 150$ minutes

Q12

4 hours 48min

Solution

A= 6 hours

B= 8 hours

C= 12 hours(empties)

Total capacity= 24 units

Efficiency of A= $24/6 = 4$ units

Efficiency of B= $24/8 = 3$ units

Efficiency of C= $24/12 = 2$ units

All three can fill ($4+3-2 = 5$ units)

Now tank will be filled in $24/5 = 4.8$ hours= 4 hours 48 min

Q13

1365

Solution

Assume Cost price = X

According to the given data, $1450 - X = X - 1280 \Rightarrow 1450 + 1280 = 2X$

Therefore X = 1365

Q14

1000

Solution

If CP = 100 and MP = X

then, $X \times 0.95 - 33.33 = 100$

$\Rightarrow X = \text{Rs.}140.35$

If C.P = 100, Marked price = Rs.140.35.

If C.P = 712.5, Marked price = $(140.35/100) \times 712.5 = \text{Rs.}1000.$

Q15

Rs. 376

Solution

Q16

UF

Solution

F is sixth from the beginning of the alphabet & U is sixth from the end.

Similarly K is eleventh from the beginning & P is 11th from the end the same rule is followed in other pairs of the series.

The answer is UF

Q17

FLRIHO

Solution

C O O L E R

+3 -3 +3 -3 +3 -3

F L R I H O

Q18

Grandson

Solution

'Man's son's sister' means 'the man's daughter'.

So, the man's daughter is Smitha's mother-in-law.

So, the woman's husband is the grandson of the man.

Q19

Daughter

Solution

Male(+), Female(-), Married(=), Siblings(--)

From the figure it is clear that A is the son of D. J is the sister of A which means , she is the daughter of D.

Q20

VXFFHVV

Solution

Each letter of the word is moved three steps forward to obtain the code

V I C T O R Y

+3+3+3+3+3+3+3

Y L F W R U B

S U C C E S S

+3+3+3+3+3+3+3+3

V X F F H V V

Q21

Rainfall

Solution

As 'Disease' can be cured by taking proper 'Medicine', Similarly 'famine' can be avoided by adequate 'Rainfall'

Q22

1

Solution

Now, this is a peculiar type of flattened cube. However, the rules to solve the questions remain the same. Now, if you want to find the face that is opposite to the face with 2, you should consider it as the base. So, the top face (opposite face) will be the 1.

Q23

F

Solution

From figures (i) and (ii), we can conclude that the alphabets C, D, A and E lie adjacent to the alphabet F. So, the alphabet B lies opposite F and conversely F lies opposite B.

Q24

If the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question.

Solution

I gives the same information as given in the question.

Chandra's income from II = $\frac{4}{3} \times 4500 = \text{Rs.}6000$

So only II is needed.

Q25

If data either in the statement I alone or statement II alone are sufficient to answer the question.

Solution

From I : P is shorter than only T, this means that P is taller than all Q, R & S, so T is tallest. From II : Q only taller than S, so S is shortest, and Q is second shortest, Now T taller than P and R both, So tallest of all.

Q26

77

Solution

Step-by-step explanation:

$$210 - 1^3 = 209$$

$$209 + 2^2 = 213$$

$$213 - 3^3 = 186$$

$$186 + 4^2 = 202$$

$$242 - 5^3 = 77$$

Q27

48841

Solution

Expression = $121 : 14641 : : 221 : ?$

The pattern followed is $= x : x^2$

so the should be 48841

Q28

216

Solution

We would be first considering the case when 1 is coming at unit place and 3 or 5 is coming at 100th position and even number will be at 10000 position. The possible number of cases are $2 \times 2 \times 2 = 8$.

So, when 1 is coming at the unit position and 1 odd number is coming at 100th position, then there are 8 cases similarly when odd number is coming at 1000 position, then also there will be 8 cases so total number of cases when 1 is coming at unit position is 16. Therefore, summation of all cases is $16(1 + 3 + 5) = 144$.

Now, when even number is coming at the 1 position. Then, the number of possible cases $3 \times 2 \times 2 \times 1 \times 1 = 12$. Therefore, the summation of these numbers at unit position will be $12(2 + 4) = 72$. So, the total sum of all these numbers will be $144 + 72 = 216$ at unit position.

Alternate Method:

Option 1 (last digit even)

2 odd numbers out of 3 can be arranged in $3P2 = 3!$ Ways

The even numbers can be arranged in $2!$ ways

$$\text{Sum} = (3! \times 2) \times (2+4) = 72$$

Option 2 (last digit odd)

Last number is either 1, 3 or 5

Given that an odd number can only occupy an odd position, so $2C1 = 2$

Either one of the two odd digits can be selected $2C1 = 2$

The other odd number has only two places left.

The even numbers can be arranged such in a possible $2!$ ways.

$$\text{So } (2 \times 2 \times 2 \times 2) \times (1 + 3 + 5) = 144$$

$$\text{Total} = 72 + 144 = 216$$

Q29

16

Solution

In a row of thirty boys,

R is fourth from the right end and 27th from the left end

W is tenth from the left end

$$\text{Between R and W} = 27 - 10 - 1 = 16 \text{ persons}$$

Q30

Either I or II is correct

Solution

Either I or II follows

Q31

on

Solution

In general, on is used to indicate touching and being supported by the top surface of (something), or moving to a position that is supported by something

Q32

for

Solution

We use for to talk about a purpose or a reason for something

Q33

(b)

Solution

'herself' because Sita has dressed Sita.

Q34

A

Solution

The whom is for the subject Tendulkar, so it has to be 'who' and not 'whom'

Q35

Jumped

Solution

In this sentence jumped is the action verb.

Q36

your / yourselves

Solution

The pronoun here should denote the brother belonging to him , thus the appropriate pronoun would be "your"

Q37

Meanwhile

Solution

In the given sentence there are two actions taking place. One is the person sleeping soundly and the crocodile creeping closer. Both the actions are happening at the same time. The only option which gives away the similar meaning is Meanwhile (at the same time)

Q38

situation - incongruous

Solution

The semicolon indicates that the second part of the sentence expands on the first part. So, the second part tells us we are talking about the position, or situation of a cathedral. And since the first part tells us that architects did not pay attention to situation, the cathedral was positioned randomly in odd (incongruous) surroundings. (incongruous = not matching, odd; apt = suitable; ambience = atmosphere, environment)

Q39

capital investment in commercial office buildings, even though vacancy rates in existing structures are exceptionally high and there is

Solution

Proper terminology used is capital investment and has been used only in options (capital investment in commercial office buildings, even though vacancy rates in existing structures are exceptionally high and there is) and (capital investment in commercial office buildings despite vacancy rates in existing structures that are exceptionally high, and although there is). Hence options (capital to be invested in commercial office buildings even though there are exceptionally high vacancy rates high in existing structures with) and (investing capital in commercial office buildings even though the vacancy rates are exceptionally high in existing structures with) get rejected outright. Despite vacancy rates.... exceptionally high as in option (capital investment in commercial office buildings despite vacancy rates in existing structures that are exceptionally high, and although there is) implies that the structures are exceptionally high whereas the original statement implied the rates as being high.

Hence option (capital investment in commercial office buildings despite vacancy rates in existing structures that are exceptionally high, and although there is) is also rejected and only option (capital investment in commercial office buildings, even though vacancy rates in existing structures are exceptionally high and there is) is the correct option.

Q40

2

Solution

Ans (2). Replace 'was' by 'were'. The question given here is hypothetical and I will never be that person I am telling (an imaginary condition). So it should take the second person to create the subjunctive mood. As a second person here, he takes the verb 'were'. Hence error is in part 2.

Q41

Jagdish said that they had passed by a beautiful lake when they had gone on a trip to Goa.

Solution

The given sentence is in Direct speech, When changed to Indirect speech , we is changed to they.

Passed by becomes they has passed by
went becomes had gone

The right answer is,

Jagdish said that they had passed by a beautiful lake when they had gone on a trip to Goa.

Q42

He asked them whether they would listen to such a man.

Solution

The sentence that begins with an auxiliary, takes 'whether' or 'if' as connective.

Q43

thoughtful

Solution

Capricious means given to sudden and unaccountable changes of mood or behavior.

So its opposite will be predictable, predetermined or certain. Thus the close opposite is thoughtful.

Q44

rustic

Solution

The word yokel means bumpkin or clown. Ignoramus refers to known nothing, dandy refers to fine and recluse refers to outsider. So the best answer is rustic which means rural or pastoral.

Q45

Good marks were seldom obtained by those who worked hard.

Solution

Solution:

The given sentence is in active voice and simple past tense. It is also a complex sentence

When the voice is changed, Those becomes object and good marks become subject

In passive voice, the sentence takes the auxiliary verb were.

The right answer is "**Good marks were seldom obtained by those who worked hard.**"

Q46

All the letters were posted yesterday.

Solution

Solution:

The given sentence is in active voice and in simple past tense

When the voice is changed,

posted becomes was posted. As the subject is All the letters in passive voice, was held becomes were held. The right answer is "All the letters were posted yesterday."

Q47

civil war diverted people's energies to war and made political and economic structures moribund

Solution

Option (it was not until 1997 that the rebels seized power ending Mobutu's reign that was characterized by bloodshed and economic decline) talks about Mobutu's reign while the passage talks of the conditions that led to a state of mess.

Option (the economy is slowly being revived after Museveni introduced economic reforms when he seized power in 1987) can be discarded as it talks of Museveni grabbing power. But does not clarify as to which country it is talking about.

Option (as Africans tire of war and corrupt leaders, general elections remain the best way of getting rid of them) is a close call but can be discarded. As the state of war has not yet been preached in the passage.

So only option (civil war diverted people's energies to war and made political and economic structures moribund) fits aptly when it describes the mess created due to the civil war as indicated by the happenings in the passage.

Q48

C

Solution

The error lies in part C of the sentence as the word '**absquatulate**' has been spelt incorrectly.

It means '**to depart hurriedly.**'

Q49.

Because of the interaction between warm and cool air which is unpredictable in nature and can lead to storms

Solution

The situation in the troposphere is defined as unstable because the reaction of the natural atmospheric phenomenon like climate, temperature, humidity, rainfall, etc. are not realistic, predictable and stable.

Q50.

Drop in Stratospheric water vapour of less than one part per million

Solution

From the last few lines of the passage. The stratospheric region is the atmosphere above 50 km above Earth's surface. The stratospheric water vapors add to the global warming in the atmosphere.

Section 2 - Technical MCQ

Q1

Center

Solution

No Solution

Q2

All of the mentioned options

Solution

No Solution

Q3

Either Times New Roman or Calibri

Solution

In Word 2003 and earlier versions, default font was Times New Roman, 12 pt. From Microsoft Word 2007 and higher versions default font is Calibri, 11 pt.

Q4

Format

Solution

No Solution

Q5

By Double Click on the Format Painter Icon

Solution

No Solution

Q6

Yes

Solution

No Solution

Q7

Margin that is added to the binding side of page when printing

Solution

No Solution

Q8

Wireless networks

Solution

The Extensible Authentication Protocol (EAP) is an authentication protocol used to connect a network node to the Internet. It designed by extending the methods used by the Point-to-Point Protocol for authentication

Q9

256 bits

Solution

No Solution

Q10

To encode binary data for transmission in email messages

Solution

No Solution

Q11

Added

Solution

Each layer adds its own header to the packet from the previous layer. For example, in the Internet layer, the IP header is added over the TCP header on the data packet that came from the transport layer

Q12

default

Solution

Choose the

Q13

All of the mentioned options

Solution

Answer: d

Explanation: Public, private, community, and hybrid clouds are deployment models

Q14

4

Solution

Answer: d

Explanation:

There are four types of dimensions in Cloud Cube

Q15

2

Solution

Answer: b

Explanation:

There are two types depending upon network firewall.

Q16

None of the mentioned options

Solution

Answer: d

Explanation:

The sourcing dimension addresses the deliverer of the service

Q17

Hybrid

Solution

No Solution
Q18
Virtualization

Solution

No Solution
Q19
49056

Solution

No Solution
Q20
Line 7

Solution

No Solution
Q21
0

Solution

No Solution
Q22
1 3 5 10 8 0

Solution

No Solution
Q23
ASCII values of characters will be displayed

Solution

No Solution
Q24
6

Solution

No Solution

Q25

6 1 9 1 6

Solution

No Solution

Q26

CODE

Solution

No Solution

Q27

Nothing will be printed

Solution

No Solution

Q28

Code

Solution

No Solution

Q29

10 5 2 1

Solution

No Solution

Q30

25 12 22 11 9 34 64

Solution

No Solution

Q31

1

Solution

No Solution
Q32
Hello

Solution

No Solution
Q33
-3

Solution

No Solution
Q34
14

Solution

No Solution
Q35
5

Solution

No Solution
Q36
11

Solution

No Solution
Q37
Mail Merge

Solution

No Solution
Q38
Auto correct

Solution

No Solution

Q39

Ctrl + End

Solution

No Solution

Q40

Ctrl + W

Solution

No Solution

Section 3 - Coding

Q1Test CaseInputOutput

8

7

1 4 11 16 23 7 2 9

23 10 7 11 9 5 14

52

Weightage - 10InputOutput

5

5

1 2 3 4 5

5 3 6 7 8

28

Weightage - 20InputOutput

8

8

11 9 5 6 7 12 18 2

18 12 11 4 1 3 8 13

58

Weightage - 20InputOutput

10

5

8 15 22 14 20 12 7 5 13 17

10 20 22 14 12

75

Weightage - 25InputOutput

```
6
7
7 6 5 12 15 18
18 15 12 10 17 20 2
67
```

Weightage - 25Sample InputSample Output

```
6
7
2 4 6 7 8 1
1 4 6 3 5 9 11
45
```

Sample InputSample Output

```
6
7
4 8 3 6 2 7
9 7 4 2 3 5 1
29
```

Sample InputSample Output

```
5
4
9 -4 3 2 -5
2 -5 7 9
6
```

Solution

```
#include<stdio.h>
int SumOfUncommonNum(int arr1[], int arr2[],int n,int m);
int main()
{
    int n,m,i;
    scanf("%d",&n);
    scanf("%d",&m);
    int arr1[n],arr2[m];
    for(i=0;i<n;i++)
    {
        scanf("%d",&arr1[i]);
    }
    for(i=0;i<m;i++)
    {
        scanf("%d",&arr2[i]);
    }
    printf("%d",SumOfUncommonNum(arr1,arr2,n,m));
    return 0;
}
```



```

int SumOfUncommonNum(int arr1[], int arr2[],int n,int m)
{
    int i,j,flag,sum=0;
    for(i=0;i<n;i++)
    {
        flag=1;
        for(j=0;j<m;j++)
        {
            if(arr1[i]==arr2[j])
            {
                flag=0;
                break;
            }
        }
        if(flag==1)
        {
            sum=sum+arr1[i];
        }
    }
    for(i=0;i<m;i++)
    {
        flag=1;
        for(j=0;j<n;j++)
        {
            if(arr2[i]==arr1[j])
            {
                flag=0;
                break;
            }
        }
        if(flag==1)
        {
            sum=sum+arr2[i];
        }
    }
    return sum;
}

#include<bits/stdc++.h>
using namespace std;
int SumOfUncommonNum(int arr1[], int arr2[],int n,int m);
int main()
{
    int n,m,i;
    cin>>n;
    cin>>m;
    int arr1[n],arr2[m];
    for(i=0;i<n;i++)
    {
        cin>>arr1[i];
    }
    for(i=0;i<m;i++)
    {
        cin>>arr2[i];
    }
    printf("%d",SumOfUncommonNum(arr1,arr2,n,m));
    return 0;
}

int SumOfUncommonNum(int arr1[], int arr2[],int n,int m)
{

```

```

int i,j,flag,sum=0;
for(i=0;i<n;i++)
{
    flag=1;
    for(j=0;j<m;j++)
    {
        if(arr1[i]==arr2[j])
        {
            flag=0;
            break;
        }
    }
    if(flag==1)
    {
        sum=sum+arr1[i];
    }
}
for(i=0;i<m;i++)
{
    flag=1;
    for(j=0;j<n;j++)
    {
        if(arr2[i]==arr1[j])
        {
            flag=0;
            break;
        }
    }
    if(flag==1)
    {
        sum=sum+arr2[i];
    }
}

return sum;
}
import java.io.*;
import java.util.Scanner;
class Main
{
    public static void main(String args[])
    {
        Scanner sc=new Scanner(System.in);
        int n,m,i;
        n=sc.nextInt();
        m=sc.nextInt();
        int arr1[]=new int[n];
        int arr2[]=new int[m];
        for(i=0;i<n;i++)
        {
            arr1[i]=sc.nextInt();
        }
        for(i=0;i<m;i++)
        {
            arr2[i]=sc.nextInt();
        }
        Main obj=new Main();
        System.out.printf("%d",obj.SumOfUncommonNum(arr1,arr2,n,m));
    }
}

```

```

    }
int SumOfUncommonNum(int arr1[], int arr2[],int n,int m)
{
    int i,j,sum=0,flag;
    for(i=0;i<n;i++)
    {
        flag=1;
        for(j=0;j<m;j++)
        {
            if(arr1[i]==arr2[j])
            {
                flag=0;
                break;
            }
        }
        if(flag==1)
        {
            sum=sum+arr1[i];
        }
    }
    for(i=0;i<m;i++)
    {
        flag=1;
        for(j=0;j<n;j++)
        {
            if(arr2[i]==arr1[j])
            {
                flag=0;
            }
        }
        if(flag==1)
        {
            sum=sum+arr2[i];
        }
    }
    return sum;
}
}
def SumOfUncommonNum(l1,l2):
    s1=set(l1)
    s2=set(l2)
    return sum(s1^s2)
M=int(input())
N=int(input())
l1=list(map(int,input().split()))
l2=list(map(int,input().split()))
print(SumOfUncommonNum(l1,l2))

```

Q2Test CaseInputOutput

```

8
10 5 12 61 58 72 90 80
88

```

Weightage - 10InputOutput

```

10
10 5 22 65 8 75 90 80 34 0222

```

330

Weightage - 10InputOutput

10
10 25 22 65 28 75 56 90 80 123
182

Weightage - 20InputOutput

12
10 25 22 65 28 83 75 56 90 29 80 123
241

Weightage - 20InputOutput

15
10 25 84 22 65 28 0124 83 75 56 982 90 29 80 123
1233

Weightage - 40Sample InputSample Output

7
2 30 15 10 8 25 80
100

Sample InputSample Output

8
10 5 22 65 8 75 90 80
142

Sample InputSample Output

7
2 30 15 10 8 25 80
100

Solution

```
#include <bits/stdc++.h>
using namespace std;
int maxProfit(int price[], int start, int end)
{
    if (end <= start)
        return 0;
    int profit = 0;
    for (int i = start; i < end; i++)
    {
        for (int j = i + 1; j <= end; j++)
        {
            if (price[j] > price[i])
            {
                int curr_profit = price[j] - price[i] +
maxProfit(price, start, i - 1) + maxProfit(price, j + 1, end);
```

```

        profit = max(profit, curr_profit);
    }
}
return profit ;
}
int main()
{
    int n ;
    scanf("%d",&n);
    int price[n] ;
    for(int i = 0 ; i<n ; i++)
        scanf("%d",&price[i] );
    printf("%d",maxProfit(price, 0, n-1) );
    return 0 ;
}
#include <bits/stdc++.h>
using namespace std;
int maxProfit(int price[], int start, int end)
{
    if (end <= start)
        return 0;
    int profit = 0;
    for (int i = start; i < end; i++)
    {
        for (int j = i + 1; j <= end; j++)
        {
            if (price[j] > price[i])
            {
                int curr_profit = price[j] - price[i]+
maxProfit(price, start, i - 1)+ maxProfit(price, j + 1, end);
                profit = max(profit, curr_profit);
            }
        }
    }
    return profit ;
}
int main()
{
    int n ;
    cin >> n ;
    int price[n] ;
    for(int i = 0 ; i<n ; i++) cin >> price[i] ;
    cout << maxProfit(price, 0, n-1) ;
    return 0 ;
}

```