Accenture Practise Questions Set 1

Section 1 - Cognitive

Section Summary

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

Additional Instructions:

None

Q1.
The present ages of A and B are 20 and 38 years, respectively. After K years, the ratio of ages of B to A will be 13:7. What is the value of K?

- 10 years
- 12 years
- 5 years
- 1 year

Q2.
The average of the first 12 prime numbers is

- 10
- 12.9
- 12.5
- 16.41

Q3.
A man can row at 4 kmph in still water. If the velocity of the current is 1 kmph and it takes him 8 hours to row to a place and come back, then how far is that place?

- 12 km
- 26 km
- 15 km
- 32 km

Q4.
For the following question, four options are given. choose the correct option:

The figure formed by joining the consecutive midpoints of the sides of a quadrilateral ABCD is a rhombus (and a rhombus only) if and only if ABCD is

- a rectangle

a rhombus

a trapezium

none of these

Q5.

The area of a parallelogram ABCD is A sq cm. If the distance between AB and DC is d_1 cm and the distance between BC and AD is d_2 cm, then the perimeter of the parallelogram is

$\frac{2A(d_1 + d_2)}{d_1 d_2}$

$\frac{2A(d_1 + d_2)}{d_1 + d_2}$

$\frac{Ad_1 d_2}{d_1 + d_2}$

$\frac{A(d_1 + d_2)}{d_1 + d_2}$

Q6.

A tree bent by the wind. The top of the tree meets the ground at an angle of 60°. If the distance between the top of the foot and the base of the tree is 8 m, then what was the height of the tree?

$8(\sqrt{3}-2)$ m

$8(\sqrt{3}+2)$ m

$8(\sqrt{3}-4)$ m

$8(\sqrt{3}+4)$ m

Q7.

A ladder 5 metres long leans against a vertical wall. The bottom of the ladder is 3 metres from the wall. If the bottom of the ladder is pulled 1 metre farther from the wall, how much does the top of the ladder slide down the wall?

1 m

7 m

2 m

None of these

Q8.
Find the value of log 8 + log ($_{18}18$).

- 1
- 0
- 0.5
- -0.6

Q9.
What will be the value of f(x) after solving it?

$f(x) = \log_{10}10 + \log_{20}20 + \log_{30}30$

- 0
- 3
- 10
- 5

Q10.
If x is a prime number and $x^2 + y^2 = z^2$ where y, z are natural numbers then y =?

- $x^2 - 1$
- $\frac{(x^2 + 1)}{2}$
- x + 1
- none of these

Q11.
What will be the fraction of 20%

- 1/4
- 1/5
- 1/10
- None of above

Q12.
The price of sugar is raised by 40%. By how much percent must a man reduce his consumption of sugar so as not to increase his expenditure?

- 28.5714%
- 33.33%

- 9 111111 %
- 8 1/3%

Q13.
In how many ways can 5 Americans and 5 Australian people be seated around a round table such that no two Americans are in adjacent positions?

- 1980
- 2286
- 2880
- 2990

Q14.
Tap A fills a tank in 4 hours, whereas tap B empties the tank in 24 hours. A and B are opened alternately for 2 hours each. Every two hours, the level of water is found to increase by 0.5 meters, Find the depth of the tank.

- 6.4 m
- 2.16 m
- 4.80 m
- None of these

Q15.
A bag contains 6 white, 7 red and 5 black balls. If 3 balls are drawn from the bag at random without replacement, then what is the probability that all of them are white?

- 5/204
- 3/204
- 5/256
- 3/256

Q16.
A man sells two horses for Rs.1955 each. On one he gains 15% and on the other he loses 15%, His total gain or loss is

- Rs.40.00
- Rs.90.00
- Rs.97.75
- Rs.19.55

Q17.
The rate of interest on a sum of money is 4% per annum for the first 2 years, 6% per annum for the next 4 years and 8% per annum for the period beyond 6 years. If the simple interest accrued by the sum for a total period of 9 years is Rs. 1120, what is the sum?

- 2400
- 2500
- 3000
- 2000

Q18.
The population of a town increases each year by 5% of its total at beginning of the year. If the population on 1 January 2015 was 40000. What was it on 1 January 2017?

- 44100
- 44200
- 48500
- 45000

Q19.
Fill in the blank with a suitable article from the options given.

Gold is …….. precious metal.

- a
- an
- the
- no article required

Q20.
Select the option that is most nearly OPPOSITE in meaning to the given word:

STILTED

- informal
- verbose
- secretive
- senseless

Q21.

In the question given below is followed by two arguments numbered I and II. You have to decide which of the arguments is a 'strong' argument and which is a 'weak' argument.

Statement :
Is paying ransom or agreeing to the conditions of kidnappers of political figures, a proper course of action?

Arguments :
I. Yes. The victims must be saved at all cost.
II. No. It encourages the kidnappers to continue their sinister activities.

- if only argument I is strong
- if only argument II is strong
- if neither I nor II is strong
- if both I and II are strong

Q22.
Spot the error in the given sentence which is divided into parts and if there is no error mark "e" as the answer

(a) I saw a man hit with a stone/ (b) but did not know / (c) whom it was/ (d) due to darkness. / (e) No error.

- a
- b
- c
- d
- e

Q23.
Find the correct tense.
Have you ever watched a film in English?

- Present Perfect
- Past Progressive
- Present Perfect Progressive
- Simple Past

Q24.
Fill in the blank with the right phrase or idiom:

I have observed that our leaders conveniently _____major issues like getting black money back to India.

- skate over
- skate in
- skate up
- skate in

Q25.
Choose an option, which can be substituted for a given sentence or phrase

An imaginary place or state in which everything is perfect.

- Dystopia
- Utopia
- Nostalgia
- Osteopenia

Q26.
Convert from direct to indirect speech

The woman said, "No, I refuse to confers guilt."

- The woman emphatically refused to confers guilt.
- The woman refused to confers her guilt.
- The woman told that she did not confers guilt.
- The woman was stubborn enough to confers guilt.

Q27.
Fill in the blanks:

He gained his object_____ persuasion.

- through
- by
- across
- with

Q28.
Choose the word or words that best fit(s) the meaning of the each sentence.

Always a popular musical instrument, the clarinet becomes even more _____ when played by a _____ such as Pete Fountain, the famous New Orleans musician.

- euphonious, novice
- daunting, musician
- appealing, virtuoso
- eclectic, tyro

Q29.
The sentence given below has four parts, indicated by (a), (b) and (c). Read the sentence to find out whether there is an error. If the sentence has no error, indicate the part (d), which stands for 'No error'. (Ignore the error of punctuation, if any)

In a city like this (a) / where the population is the huge(b) / I did not know hardly (c) / anyone (d).

- (a)
- (b)
- (c)
- (d)

Q30.
Find out the correct indirect speech for the given sentence.

The Principal said to the peon, "Let the boy go in".

- The Principal ordered to the peon to allow the boy to come in.
- The Principal ordered the peon to allow the boy to come in.
- The Principal ordered the peon to let the boy come in.
- The Principal ordered the peon to allow him to come in.

Q31.
Select the synonym for the given word.

VITIATE

- vitaminize
- ventilate
- improve
- spoil

Q32.
Convert the voice of the given statement :

The pets hold a special place in the hearts of their owners.

- A special place in the hearts of the pet owners is held by them
- A special place was held by the pets in the hearts of their owners.
- A special place is held by the pets in the hearts of their owners.
- A special place is being held by the pets in the hearts of their owners

Q33.
Out of the four alternatives choose the one which can be substituted for the given words / sentence.

A small platform that a person stands on when giving a speech or conducting an orchestra, etc.

- Court
- Rink
- Panel
- Podium

Q34.
Replace the underlined part of the sentence with a grammatically correct option.

If the magazines will be published last week, why haven't they been bought yet?

- was published
- were published
- would have been published
- are being published

Q35.
Fill in the blank with a suitable article from the options given.

_____Amazon is _____ longest river in the world.

- A, the
- An, a
- The, the
- no article, the

Q36.
Find the missing term
G, K, M, ?, S

- O
- P
- Q
- R

Q37.
Rekha while jogging in the morning saw a man who was her classmate during her primary school days. She remembered the man as the son of the brother of her mother. How is the man related to Rekha?

- Nephew
- Uncle
- Cousin
- Son

Q38.
A clock which loses uniformly was observe 5 minutes fast at 4:00 p.m on a Friday, subsequent Sunday at 8:00 a.m, the watch was 3 minutes slow. When did the watch shows the correct time?

- 5:00 am on Saturday
- 5:00 pm on Saturday
- 6:00 pm on Saturday
- 6:00 am on Saturday

Q39.
What is the angle covered by the minute-hand in 27 minutes?

- 160º
- 156º
- 162º
- 168º

Q40.
If FIRE is coded as JMVI, then IDENTICAL is coded as:

- LGIQWLFEO

MBDJUOFEJ

MHIRXMGEP

LBDJUOFEJ

Q41.
In the figure given below, which dice we can make?

Q42.
Barry after vacation, wanted to reach his house directly. He drove 20ft towards South and then 15ft towards East. He then turned to the North and covered 10ft. Further he turned to West and moved 13ft. Finally he turned right and moved 10ft. How far and in which direction is he from his starting point?

2 ft, West

5 ft, East

3 ft, North

2 ft, East

Q43.
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.

In a class of 30 students, Angela secured the third rank among the girls, while her brother Reagan studying in the same class secured the sixth rank in the whole class. Between the two, who had the lowest overall rank?
I. Reagan was among the top 25% of the boys' merit list in the class of which 60% were boys.
II. There were three boys among the top five rank holders and three girls among the top ten rank holders.

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

If the data in both the Statements I and II together are necessary to answer the question

Q44.
Complete the series:
225, 224, 227, 226, 229, 228, ?

230

229

231

240

Q45.
Find which of the following conclusion is correct as per the given statements :

Statements:
Some box is pot.
No pot is sweet.
All sweets are Milk.
Conclusions:
I. Some box is not sweets is a possibility.
II. Some pots can be Milk is a possibility.
III. Some Milk is not pot is a possibility.

If only conclusion II follows

If both conclusions I and III follows

If both conclusions I and II follows

If all conclusions follows

Q46.
In a town of 10,000 families, it was found that 40% families buy newspaper A, 20% families buy newspaper B and 10% families buy newspaper C. 5% families buy A and B, 3% buy B

and C and 4% buy A and C If 2% families buy all the three newspapers, then the number of families which only buy newspaper A is

- 3100
- 3200
- 3300
- 3400

Q47.
The question consists of a main statement followed by 4 statements in the answer options. From the given options select the one that logically follows the main statement.

If you study then you will pass the exam and will get a good girlfriend.

- You did not study then you will not pass the exam or will not get a good girlfriend.
- You did not pass the exam and did not get a good girlfriend implies that you did not study.
- You passed the exam and also got a good girlfriend implies that you have studied.
- None of these

Q48.
The following question consists of five figures marked A, B, C, D and E called the problem figures followed by four other figures 1,2,3 and 4 called the Answer Figures. Select a figure from among the Answer Figures which will continue the same series as established by the five Problem Figures

Q49.
In the question below are given some statements followed by some Conclusions. You have to take the given statements to be true even if they seem to be at variance from commonly

known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

Statements:

No day is month

Only a few month is year

All year is weeks

Conclusions:

I. All weeks can never be day

II. Some year are day

- If only conclusion I follows
- If only conclusioni II follows
- Both conclusions I and II follow
- If neither conclusion I nor II follows

Common Content:

Read the passage and answer the question that follows

The Indian middle class consist of so many strata that it defies categorisation under a single term class, which would imply a considerable degree of homogeneity. Yet two paradoxical features characterise its conduct fairly uniformly; extensive practice and intensive abhorrence of corruption.

In the several recent surveys of popular perceptions of corruption, politicians of course invariably and understandably top the list, closely followed by bureaucrats, policemen, lawyers, businessmen and others. The quintessential middle class. If teachers do not figure high on this priority list, it is not for lack of trying, but for lack of opportunities. Over the years, the sense of shock over acts of corruption in the middle class has witnessed a steady decline, as its ambitions for a better material life have soared but the resources for meeting such ambitions have not kept pace.

What is fascinating, however, is the intense yearning of this class for a clean corruption less politics and society, a yearning that has again and again surfaced with any figure public or obscure, focus on his mission of eradicating corruption. Even the repeated failure of this promise on virtually every man's part has not subjected it to the law of diminishing returns.

Q50.

The Indian Middle class is

- defiant
- mysterious
- homogenous
- stratified

Section 2 - Technical MCQ

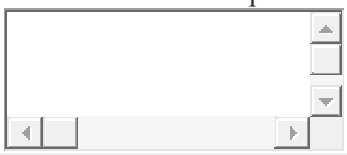
Section Summary

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

Additional Instructions:

None

Q1.
What will be the output of the following pseudocode?

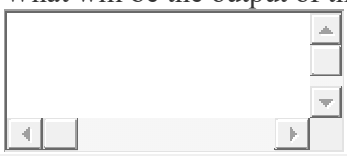


```
1
2
3
4
5
6
7
8
9
```

Integer j,m
set m=1
integer a[4]= { 1, 0, 1, 2}
for (each j from 0 to 3)
if (j> a[j])
m= m - a[j] + j
end if
end for
print m

2
7
3
4

Q2.
What will be the output of the following pseudocode?



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

10

Integer a, b, c
set a=6, b= 2, c= 7
c= 11
for (each c from 4 to 5)
a= (b^c) +c
a= (8+6) + a
a=c
end for
a= (b+b) + a
print a + b

12
11
10
9

Q3.
What will be the output of the following pseudocode?

1
2

String str1= "aaAa", str2 = " AAa"
Print countVowel(upper(str1)+ lower(str2))

17
7
8
4

Q4.
What will be the output of the following pseudocode?

1
2
3
4
5
6
7

```
8
9
10
```

```
Integer a,b,c
set a=9, b = 11, c=9
if ((a+ b) < ( b-a))
c=12 + b
if (( a & 5) < c)
c=12
a=(12+7) + c
end if
end if
print a + b + c
```

- 44
- 34
- 54
- 55

Q5.
What will be the output of the following pseudocode for p = 2 and q = 3?

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

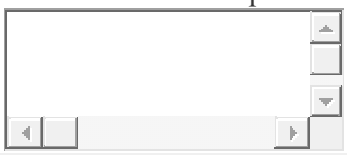
```
Integer funn(integer p, integer q)
if (p>q AND q>p)
p= q + q + q + q + q +q
else
q=0
end if
return p + q
end function funn ()
```

- 2
- 1
- 4

10

Q6.

What will be the output of the following pseudocode?



```
Integer a, b, c
set a=1, b=6, c=4
c= ( c + 4) + c
c = ( b + b) ^ a
c= 10+a
if (( a & b & c) < (b ^ c ^ a))
c= (b +9) & a
b= (c + 7) + b
else
b =(a & a) + c
end if
print a + b + c
```

12

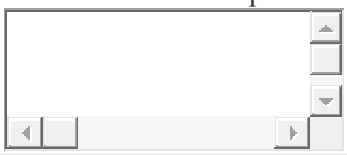
16

23

20

Q7.

What will be the output of the following pseudocode?



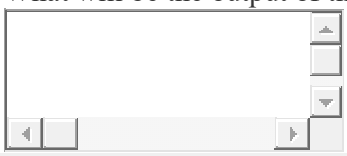
```
1
2
3
4
```

```
5
6
7
8
9
10
```

```
Integer a, b, c
set a=5, b= 4, c =7
for (each c from 5 to 8)
a=3
end for
for (each c from 5 to 6)
a = b ^ a
a = 1 + c
end for
print a + b
```

- -11
- -9
- 11
- 10

Q8.
What will be the output of the following pseudocode for a = 5 and b = 3?



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

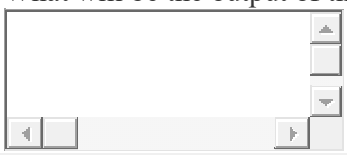
```
Integer funn(integer a, integer b)
if(a > b)
return b + funn (b,a)
end if
if (a < b)
return a + b
end if
end function funn ()
```

- 11
- 12

8

9

Q9.
What will be the output of the following pseudocode?



```
Integer p, q, r
set p= 1, q= 1, r= 2
if (q ^ ( r & p)> p)
p= 0
else
p= 1
q= 3
end if
print p + q + r
```

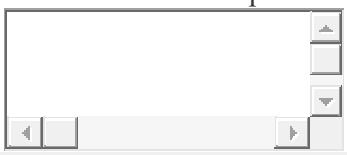
4

3

2

8

Q10.
What will be the output of the following pseudocode?



9
10
11

```
Integer a, b, c
set a=12, b=13
for (each c from 5 to 7)
if ( a> c)
b=10
else
Jump out of the loop
end if
a = b
end for
print a + b
```

- 22
- 20
- 3
- 30

Q11.
We can remove or hide the border of a shape by selecting _____.

- no line
- no outline
- white line
- no border

Q12.
To change the line height to 1.5, we use which of the shortcut key?

- Ctrl+1
- Ctrl + 2
- Ctrl + 3
- Ctrl + 5

Q13.
_______controls all the main slide control tasks for your presentation.

- Task bar
- Task pane
- Control Panel

All of the mentioned options

Q14.
Press _____ to delete one word to the right.

Ctrl + Delete

Ctrl + Enter

Ctrl + Tab

Ctrl + Backspace

Q15.
Which PowerPoint view displays each slide of the presentation as a thumbnail and is useful for rearranging slides?

Slide Master

Slide Show

Slide Sorter

Notes Page

Q16.
Which key helps to move to the beginning of a line?

Page Up

Page Down

Home

Insert

Q17.
To center the selected text, the shortcut key is _____.

Ctrl+ C

Ctrl+ E

Ctrl+ O

Ctrl+ U

Q18.
You can convert existing Excel worksheet data and charts to HTML documents by using the _____.

Internet Assistant Wizard

Intranet Wizard

- Import Wizard
- Export Wizard

Q19.
What term describes a background that appears as a grainy, non-smooth surface?

- Pattern
- Gradient
- Texture
- Velvet

Q20.
The default style for new data keyed in a new workbook is _____.

- Comma
- Normal
- Currency
- Percent

Q21.
How can you update the values of formula cells if the auto-calculate mode of Excel is disabled?

- F8
- F10
- F9
- F11

Q22.
Microsoft Excel uses the _____ function to calculate the results in the data table

- RESULT
- CALTAB
- TABLE
- AUTOSUM

Q23.
Consider a situation where you have to choose between the major cloud services. Which is the best option to choose if you want your service platform to support Docker and Kubernetes, which automatically manage clusters while using containers?

- Azure
- AWS
- Google Cloud
- Alibaba Cloud

Q24.
Which of the following statements is not true about the cloud and data centers?

- Internal Management team is required to run the data center
- Data center is better when it comes to maintaining data security
- Cloud is better when it comes to maintaining data security
- Cloud is better when it comes to economically maintaining data security

Q25.
Which cloud service model provides the highest level of control and flexibility for users?

- Software as a Service (SaaS)
- Platform as a Service (PaaS)
- Infrastructure as a Service (IaaS)
- Function as a Service (FaaS)

Q26.
How is WPA 2 different from wired equivalent privacy?

- Bit flipping attack has the possibility of breaking the encryption
- It uses pre-shared key or 802,Ix as authentication methods
- It is based on data encryption security algorithm with 64-bit block size
- It uses pre-shared key or 802,1x as, authentication methods and It is based on data encryption security algorithm

Q27.
Which of the following algorithms allows each party to combine their private data with public data to generate an identical secret session key?

- Diffie-Hellman algorithm
- Rivest cipher 4 encryption algorithm
- Rivest cipher 5 encryption algorithm
- Advanced encryption standard algorithm

Q28.
Which of the following payment options is best suited for small businesses in the cloud?

- pay-as-you-go
- pay-and-use
- pay-per-use
- None of the mentioned options

Q29.
Which of the following is correct based on the below statements?
A. Clouds offer limited data storage capacity to users.
B. Clouds offer unlimited data storage capacity to users.
C. In both data centers and the cloud, there is a third party involved in managing data, but the cloud has more data theft.
D. In both the data center and the cloud, there is a third party involved in managing data, but the data center has more data theft.
Choose the correct answer from the options.

- Only A and D
- Only B and C
- Only B and D
- Only A and C

Q30.
What are the factors that are responsible for depleting network security protocols and acting as a threat to the networking servers?

- Hacker Attacks and Threats
- Natural Disasters
- Backdoor and Leakage of Computer Software
- All of the mentioned options

Q31.
Which of the following items is not used in Local Area Networks(LANs)?

- Computer Modem
- Cable
- Modem
- Interface card

Q32.
How many bits are there in the Ethernet address?

16 bits

32 bits

48 bits

64 bits

Q33.

What will be the output of the following pseudocode for a = 1, b = 4?

```
Integer funn(Integer a, Integer b)
   if (2>a)
      return funn(a+1,a+2) + funn(a+3,a+4)
   End if
return a+1
```

8

5

13

20

Q34.

What will be the output of the following pseudocode?

```
Integer a,b,c
Set a=10, b=1, c=3
a=a+1
if (b mod c && c mod a)
   a=a+19
```

End if
Print a+c-b

- 5
- 32
- 2
- None of the mentioned options

Q35.
What will be the output of the following pseudocode for a = 4, b = 3, and c = 8?

```
Integer funn(Integer a, Integer b,Integer c)
   for (each c from 5 to 9)
      a=(c^5)^a
      if(b^c^a)<(c&a&b)
         b=(1&11)&c
      Else
         Continue
      End if
      b=(c+2)+a
   End for
return a+b
```

- 16
- 0
- 7
- 19

Q36.
What will be the output of the following pseudocode?

```
Integer n,j,k,c,t,b,array[5]
Set n=7, c=1
Set array[5]={1,6,7,11,13}
b=array[0]
for (each k from 1 to n-3)
   b=b^array[k]
end for
for (each k from 2 to n-1)
   c=c^k
Print c
```

17

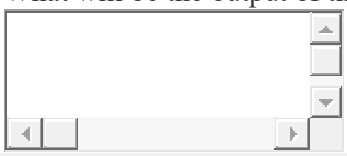
4

5

None of the mentioned options

Q37.

What will be the output of the following pseudocode for a=1 and b=5?



```
Integer funn(Integer a, Integer b)
   if (a&b>0)
      return 1+funn(b-1,a)
   Else
      return a+b
   End if
```

19

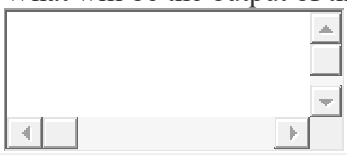
0

14

6

Q38.

What will be the output of the following pseudocode for a = 3, b = 5?



```
Integer funn(Integer a, Integer b)
   if (a>5 || b>5)
      a=10
      b=10
      a=a+10
      b=b+10
      a=a+b
      b=b+a
      return a+b
   Else
      return funn(b+2,a+2)
   End if
```

89

100

101

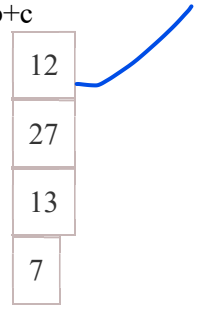
110

Q39.

What will be the output of the following pseudocode?

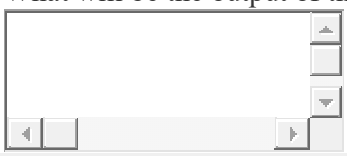
```
1
2
3
4
5
6
7
8
9
10
```

```
Integer a,b,c
Set a=2,b=4,c=10
b=(7^12)&a
b=9&a
if ((c+b)<(10-c))
    b=2^c
    b=(c^a)+b
    b=(2+12)^b
End if
Print a+b+c
```



Q40.

What will be the output of the following pseudocode?



```
1
2
3
4
5
6
7
8
9
10
11
12
```

```
Integer a,b,c
Set a=3,b=2,c=10
for (each c from 3 to 7)
   b=3+b
   a=(11+1)*c
End for
c=6+a
a=b+c
for (each c from 3 to 4)
   a=(b+12)+b
End for
Print a+b
```

60
68
72
63

Section 3 - Coding

Section Summary

- No. of Questions: 2
- Duration: 45 min

Additional Instructions:

None

Q1.

Problem Statement

Write a program for the maximum possible difference between two subsets of an array.

Given an array of n integers. The array may contain repetitive elements, but the highest frequency of any element must not exceed two. Make two subsets such that the difference of the sum of their elements is maximum and both of them jointly contain all elements of the given array along with the most important condition, no subset should contain repetitive elements.

Example

Input:
4
5 8 -1 4

Output:
Maximum Difference = 18

Explanation:
Suppose arr[ ] = {5, 8, -1, 4}

Let Subset A = {5, 8, 4} & Subset B = {-1}
Sum of elements of subset A = 17, of subset B = -1
Difference of Sum of Both subsets = 17 - (-1) = 18

Input Format

The first input line consists of the size of an array, n.
The second input consists of the array elements, separated by space.

Output Format

The output displays the maximum possible difference between two subsets of an array.

Refer to the sample output for the formatting specifications.

Constraints

2 <= n <= 100

Sample Input Sample Output

```
7
4 2 -3 3 -2 -2 8
Maximum Difference = 20
```

Sample Input Sample Output

```
4
5 8 -1 4
Maximum Difference = 18
```

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

Q2.

Problem Statement

Given two strings, where the first string may contain wild card characters and the second string is a normal string. Write a function that returns true if the two strings match. The following are allowed wild-card characters in the first string:

* - Matches with 0 or more instances of any character or set of characters.
? - Matches with any one character.

Input Format

The first string contains the characters along with the symbols - ? and *.
The second string is the one without any symbols.

Output Format

The output displays either "Yes" or "No", based on the string matching.

Sample Input Sample Output

```
i?mneo
iamneo
Yes
```

Sample Input Sample Output

```
i?m
iaam
No
```

Sample Input Sample Output

```
i*mn?o
iaamneo
Yes
```

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

Answer Key & Solution

Section 1 - Cognitive

Q1

1 year

Solution

A and B's age ratio will be :

Present age of A + K / Present age of B + K

=> (20 + K) / (38 + K) = 7/13

Solving this, we get K = 1

Q2

16.41

Solution

Sum of 12 prime no. = 197

Average = 197/12 = 16.41

Q3

15 km

Solution

Speed downstream = (4 + 1) kmph = 5 kmph.

Speed upstream = (4 - 1) kmph = 3 kmph.

Let the required distance be *x* km.

(x/5) + (x/3) = 8

=> 8x = 120

=> x= 15

Q4

a rectangle

Solution

Joining the consecutive midpoints of the sides of a quadrilateral ABCD is a rhombus and joining the consecutive midpoints of the sides rhombus ABCD is a rectangle

Q5

Solution

$AB \cdot d_1 = A$ and $AD \cdot d_2 = A$

$AB = A/d_1$ and $AD = A/d_2$

The perimeter of the parallelogram = 2 (AB + AD) =2(A/d1 + A/d2)

Ans(1)

Q6

$8(\sqrt{3}+2)$ m

Solution

Q7
1 m

Solution

Q8
0

Solution
log 8 + log 1/8
= log(8*1/8)
= log 1
= 0
Q9
3

Solution
$f(x) = \log_{10}10 + \log_{20}20 + \log_{30}30$
= 1 + 1 + 1
((i-e) $\log_a a = 1$)
= 3
Q10
none of these

Solution
Pythagorean Triplet,

$3^2 + 4^2 = 5^2$.

Let x=3 be the prime number

Now, going by answer options, equation x +1 will satisfy the given value.

i.e., y = 4 = 3 +1 satisfies the question.
Q11
1/5

Solution
WKT, 20% = 20/100 = 1/5
Q12
28.5714%

Solution
Direct from formula
40 / (100 +40) × 100 = 28.5714%
Q13
2880

Solution
For a circle n no. of items can arrange in (n-1)! ways.
The number of ways can 5 Americans arrange in a circle is 4! ways.
The number of ways can 5 Australians arrange in between Americans is 5! ways.
Then the total possibilities are 4!*5! = 2880ways

Q14
2.16 m

Solution
Total work = 24 Ltr
A's efficiency = 6 Ltr/hr
B's efficiency = 1 Ltr/hr
A and B combined = 2 x 6 - 2 x 1 = 10 Ltr for 4 hours.
In 8 hours, tank volume = 10 x 2 = 20 Ltr.
Time for remaining 4 Ltr = 4/6 = 2/3 = 0.67 hour
Total time = 8.67 hr
In 2 hour , water level increased = 0.5 m
So in 8.67 hr, water level = 2.16 m
Q15
5/204

Solution
P(A)=N(A)/N(S)
3 balls can be drawn in $18C_3$ ways.
Favourable cases = $6C_3$
Probability = 5/204
Q16
Rs.90.00

Solution
Loss = 15 × 15/100 = 2.25%.

C.P = (2 × 1955 × 100)/97.75 = Rs. 4000.

Loss = 2.25% of 4000 = Rs.90.
Q17
2000

Solution

Q18
44100

Solution
Population on 1 January 2017 = 40000 × 105/100 × 105/100 = 40000 × 21/20 × 21/20
∴ Population on 1 January 2017 = 44100

Q19
a

Solution
precious has consonant sound. The article used is 'a'
Q20
senseless

Solution
STILTED means stiff and self-conscious.
informal means unofficial.
verbose is wordy or talkative.
senseless means unconscious.
Q21
if both I and II are strong

Solution
Clearly, both the arguments in for and against are strong and enough. The conditions have to be agreed to, in order to save the life of the victims, though actually they ought not to be agreed to, as they encourage the sinister activities of the kidnappers.Hence both are strong.
Q22
c

Solution
'whom' should be be replaced by 'who' in c.
Q23
Present Perfect

Solution

No Solution
Q24
skate over

Solution
skate out- to avoid a difficult subject or situation
Q25

Utopia

Solution
Dystopia - an imagined state or society in which there is great suffering or injustice
Utopia - an imagined community or society that possesses highly desirable or nearly perfect qualities for its citizens
Nostalgia - a sentimental longing or wistful affection for a period in the past
Osteopenia - is when your bones are weaker than normal but not so far gone that they break easily
Q26
The woman emphatically refused to confers guilt.

Solution
The statement said by the woman is strong and direct. refuse becomes refused. The answer is ' The woman emphatically refused to confers guilt.'
Q27
by

Solution
The verb object in the sentence is followed by - preposition.
Q28
appealing, virtuoso

Solution
The clarinet is like even more when an expert plays. So the answer is 3.
Q29
(c)

Solution
Replace ‘did not know hardly’ by ‘hardly knew’. Hardly means ‘almost not’ and it is used as an adverb.
Q30
The Principal ordered the peon to allow the boy to come in.

Solution
When ‘Let’ is used to allow in Reported Speech of Direct Narration.Then Conversion Rule is:Sub + requested/ordered + object + to allow + Sub + to + V_1 + object

Answer - The Principal ordered the peon to allow the boy to come in.
Q31
spoil

Solution
Vitiate means to impair the quality of; make faulty; spoil.
Q32
A special place is held by the pets in the hearts of their owners.

Solution
The given sentence is in active voice. It is simple form of present tense.

The structures for active/passive voices are:

Active: Subject + verb (“s“ or “es” with singular noun) + object…Passive: Object + Is/are/am + verb (IIIrd form) + by + subject…

So, based on the above structures,
we can convert the given sentence into passive voice:

A special place is held by the pets in the hearts of their owners.
Q33
Podium

Solution
Court-a body of people presided over by a judge, judges, or magistrate, and acting as a tribunal in civil and criminal cases.-an instance of a particular situation; an example of something occurring.
Rink-an enclosed area of ice skating
Panel-surface of door or ceiling
Podium-a small platform on which a person may stand to be seen by an audience, as when making a speech or conducting an orchestra.
The right answer is podium
Q34
were published

Solution
We are talking about an action which happened last week and are comparing it to future by saying will be published, it would be correct to have both the subordinate conditional clause also in past tense. The right answer is "were published"
Q35
The, the

Solution
Amazon is a proper noun and **longest** is the superlative degree. So the appropriate answer is ***The, the.***
Q36
Q

Solution
G = 7
K = 11
M = 13
Q = 17
S = 19
All are prime numbers.

Q37
Cousin

Solution
Brother of mother---Uncle; Uncle's son---Cousin.
Q38
5:00 pm on Saturday

Solution
Number of minutes lost = 8

Total time from 4:00 p.m. on Friday to 8:00 a.m. on Sunday = 40 hours.

∴ it lost 8 minutes in 40 hours
Whenever it lost the first 5 minutes, the clock is going to show the correct time.
∴ After 25 hours (i.e.,) at 5:00 p.m. on Saturday the clock shows the correct time.

Q39
162º

Solution
The minute hand covers 6° in one minute. Hence it covers
27 × 6 = 162° in 27 minutes.

Q40
MHIRXMGEP

Solution
FIRE is coded as JMVI
F+4= J
I+4= H

Similarly Identical = MHIRXMGEP
I+4= M
D+4 = H
E+4 = I
N+4 = R
T+4 = X
I+4 = M
C+4 = G
A+4 = E
L+4 = P
Q41

Solution

Face marked with X is opposite of shaded region. So, adjacent figures of X will be plain sides.
Q42
2 ft, East

Solution

Q43
If the data in Statement II alone is sufficient to answer the question, while the data in Statement I alone is not sufficient to answer the question.

Solution
From I, boys = 60*30/100 = 18, girls = 12
25*18/100 = 3.5. So Reagan must have been in the top 4 among the boys
From II, we know there were 3 boys and 2 girls in the top 5.
It is given that Reagan is in sixth place and that Angela was third among girls.
So she must have come after Reagan since there were only 2 girls before him.
So Reagan has got the better rank and Angela got the lowest rank.
Q44
231

Solution
In this simple alternating subtraction and addition series; 1 is subtracted, then 2 is added, and so on.

Hence, 228 + 3 = 231
Q45
If all conclusions follows

Solution
Case I:

Case II:

Q46
3300

Solution

In a town there are 10000 families.
2% of the families buy all the three newspaper is 200
4% of the families buy A & C is 400 and only A & C is 400-200 = 200
3% of the families buy B & C is 300 and only B & C is 300-200 = 100
5% of the families buy A & B is 500 and only A & B is 500-200 = 300

Totally 40% of the families buy A is 4000
Then the number families which only buy newspaper A = 4000-200-200-100-300 = 3300
number of families which buy newspaper A only

n(A) = 40%,
n(B) = 20%,
n(C) = 10%,
n(A ∩ B) = 5%
n(B ∩ C) = 3%,
n(A ∩ C) = 4%,
n(A ∩ B ∩ C) = 2%

Percentage of families which buy newspaper A only = n(A) – n(A ∩ B) – n(A ∩ C) + n(A ∩ B ∩ C)
= 40 – 5 – 4 + 2 = 33%
Number of families which buy newspaper A only = (33 x 10000)/ 100 = 3300
Q47
You did not pass the exam and did not get a good girlfriend implies that you did not study.

Solution
This is of type 1:- "If X then Y and Z"
This statement implies that:
(i) (X → Y and Z)
(ii) (~ Y or/and ~ Z → ~ X) given in option B
Q48

Solution
In each step, the symbols move anti-clockwise twice. The first symbol is removed, and a new symbol is used in the end. The last symbol of the first figure is coloured in the next figure, and the coloured symbol in the first figure is white in the next.
So, the figure after E should not contain a rhombus, should have a white pentagon in the top right corner, a coloured oval in the bottom right corner, and a new figure in the bottom left. The first two conditions are fulfilled in 1, 2 and 3, but the triangle and rectangle are not new. So 2, which contains the trapezium is the answer.
Q49
If only conclusion I follows

Solution

Q50.
homogenous

Solution
From the line, "The Indian middle class consist of so many strata that it defies categorization under a single term class, which would imply a considerable degree of homogeneity." It is clear that the answer is homogeneous

Section 2 - Technical MCQ

Q1
4

Solution
Initially m=1 , a[4]= { 1, 0, 1, 2}
Iteration 1:
0>1(FALSE)
Iteration 2:
1>0 (TRUE)
m=1-0+1 => m=2
Iteration 3:
2>1 (TRUE)
m=2-1+2 => m=3
Iteration 4:
3>2 (TRUE)
m=3-2+3 => m=4

Finally, 4 gets printed.

Q2
11

Solution
Initially a=6, b= 2, c= 7
After running the for loop, the value of 'a' is set to 5 (the loop runs until the value of 'c' is 5).
Then a= (2+2)+5 => a= 9
Output: 9+2 = **11**

Q3
7

Solution
Initially str1= "aaAa", str2 = " AAa"
Totally 7 vowel in both string.

Q4
54

Solution
Initially a=9, b = 11, c=9
First if blocks get failed, but second if block gets executed and set c=12 and a=31
As a result 31+11+12 => 54

Q5
2

Solution
Initially p=2,q=3
If block gets fail and set 'q' as 0.
As a result, 2 gets printed.

Q6
16

Solution
Initially **a=1**, b=6, c=4
c value set as 11 (c=10+1)
If block gets executed and set 'c' as 1. (i.e) (6+9) & 1

15 => 1111
1 => 0001
15&1=>0001 (**c=1**)
b= 1+7+6 => **b=14**
As a result, it displays 1+14+1 = 16.
Q7
11

Solution
Initially a=5, b= 4, c =7
After executing first for loop, 'a' set to 3.
After executing first for loop, 'a' set to 1+ 6 = 7 (loop execute until c value is 6)
As a result 7+4 => **11**

Q8
11

Solution

No Solution
Q9
3

Solution
Initially p=1,q=1,r=2

If block gets executed and set 'p' as 0.

As a result, it displays 0+1+2 = 3.
Q10
20

Solution
Initially a=12, b=13
After executing for loop 'b' set to 10 (b=10) and 'b' value copied to a.
As a result 10+10 = 20
Q11
no outline

Solution

No Solution
Q12
Ctrl + 5

Solution

No Solution
Q13
Task pane

Solution

No Solution
Q14
Ctrl + Delete

Solution

No Solution
Q15
Slide Sorter

Solution

No Solution
Q16
Home

Solution

No Solution
Q17
Ctrl+ E

Solution

No Solution
Q18
Internet Assistant Wizard

Solution

No Solution
Q19
Gradient

Solution
A background that appears as a grainy, non-smooth surface would typically be described as a "Texture." On the other hand, a gradient refers to a smooth transition of colors or shades from one to another.
Q20
Normal

Solution

No Solution
Q21
F9

Solution

No Solution
Q22
TABLE

Solution

No Solution
Q23
Azure

Solution

No Solution
Q24
Internal Management team is required to run the data center

Solution

No Solution
Q25
Infrastructure as a Service (IaaS)

Solution

No Solution
Q26
Bit flipping attack has the possibility of breaking the encryption

Solution

No Solution
Q27
Diffie-Hellman algorithm

Solution

No Solution
Q28
pay-as-you-go

Solution

No Solution
Q29
Only A and C

Solution

No Solution
Q30
Hacker Attacks and Threats

Solution

No Solution
Q31
Modem

Solution

No Solution
Q32
48 bits

Solution

No Solution
Q33
8

Solution
funn(1,4) => funn(2,3)+funn(4,5)
funn(2,3) => 3
funn(4,5)=> 5
Therefore funn(1,4) = 3+5 =>8
Q34
32

Solution
Value a gets updated to 30. Therefore 30+1+3=32.
Q35
7

Solution
Initially a=4,b=3,c=8. Inside for loop the if block condition gets failed for all the iteration so no changes in the value. Therefore 4+3=>7.
Q36
None of the mentioned options

Solution
Initially c=1,
In second for loop :
k=2: c=1^2=>3
k=3: c=3^3=>0
k=4: c=0^4=>4
k=5: c=4^5=>1
k=6: c=1^6=>7
7 is the final value of c. So None of the mentioned options.
Q37
6

Solution

No Solution
Q38
100

Solution
funn(3,5) => fun(7,5)

funn(7,5) => a=10,b=10,
a=10+10 => 20 , b= 10+10 =>20
a=20+20 =>40
b=20+40 => 60
So funn(7,5) returns 60+40 => 100
Q39
12

Solution

No Solution
Q40
63

Solution
Initially a=3,b=2,c=10
Inside first for loop b value incrementing by 3 and a value is multiplied with 3,4,5,6,7. So after executing first for loop b=17 and a=84.
Then in the second for loop a=17+12+17 => 46, for all the iterations a remains 46. So 46+17=> 63.

Section 3 - Coding

Q1**Test CaseInputOutput**

```
5
-1 -2 -3 -4 -5
Maximum Difference = 15
```

Weightage - 20InputOutput

```
6
10 20 30 40 50 60
Maximum Difference = 210
```

Weightage - 20InputOutput

```
20
30 -47 -84 28 77 -33 92 -18 99 -57 127 2 95 137 33 86 91 -54 73 -52
Maximum Difference = 1315
```

Weightage - 25InputOutput

```
100
-74 109 83 118 -53 -25 45 -83 -65 146 -57 -33 -13 10 98 125 3 32 133 -50
135 79 73 4 132 18 93 38 53 -95 103 29 24 17 -78 -77 104 -73 -62 -99 52 56
87 39 107 134 -60 -37 12 -90 88 105 124 119 120 44 -55 126 85 -46 49 110 -
20 57 122 71 -19 -16 -15 41 -81 66 -49 -58 96 -100 11 -22 -76 6 92 46 23
82 36 136 106 -32 -79 90 -70 54 5 -97 37 142 -85 84 42 26
Maximum Difference = 6776
```

Weightage - 35Sample InputSample Output

```
7
4 2 -3 3 -2 -2 8
Maximum Difference = 20
```

Sample InputSample Output

```
4
5 8 -1 4
Maximum Difference = 18
```

Solution

```
import java.util.Scanner;
public class Main {
            static int maxDiff(int []arr, int n)
            {
                    int SubsetSum_1 = 0, SubsetSum_2 = 0;
                    for (int i = 0; i <= n - 1; i++)
                    {
                            boolean isSingleOccurrence = true;
                            for (int j = i + 1; j <= n - 1; j++)
                            {
                                    if (arr[i] == arr[j])
                                    {
                                            isSingleOccurrence = false;
                                            arr[i] = arr[j] = 0;
                                            break;
                                    }
                            }
                            if (isSingleOccurrence)
                            {
                                    if (arr[i] > 0)
                                            SubsetSum_1 += arr[i];
                                    else
                                            SubsetSum_2 += arr[i];
                            }
                    }

                    return Math.abs(SubsetSum_1 - SubsetSum_2);
            }
            static public void main (String[] args)
            {
                    Scanner sc = new Scanner(System.in);
                    int n = sc.nextInt();
                    int[] arr = new int[n];
                    for (int i = 0; i < n; i++)
                    {
                            arr[i] = sc.nextInt();
                    }
                    System.out.println("Maximum Difference = "
                                                            + maxDiff(arr, n));
            }
}
```

Q2**Test CaseInputOutput**

```
i*mneo
iaamneo
Yes
```

Weightage - 20InputOutput

```
iam?examly
iamneo
No
```

Weightage - 25InputOutput

```
enterthest?ing
enterthestring
Yes
```

Weightage - 25InputOutput

```
its*gre?tday?eing?*re
itsagreatdaybeingheere
Yes
```

Weightage - 30Sample InputSample Output

```
i?mneo
iamneo
Yes
```

Sample InputSample Output

```
i?m
iaam
No
```

Sample InputSample Output

```
i*mn?o
iaamneo
Yes
```

Solution

```
#include <iostream>
using namespace std;

bool match(string first, string second)
{
            // If we reach at the end of both strings, we are done
            if (first.empty() && second.empty())
                    return true;
```

```
            // Make sure to eliminate consecutive '*'
            if (first[0] == '*') {
                    while (first[1] == '*')
                            first.erase(0, 1);
            }

            // Make sure that the characters after '*' are present
            // in second string. This function assumes that the
            // first string will not contain two consecutive '*'
            if (first[0] == '*' && first.size() > 1
                    && second.empty())
                    return false;

            // If the first string contains '?', or current
            // characters of both strings match
            if (first[0] == '?' || first[0] == second[0])
                    return match(first.substr(1), second.substr(1));

            // If there is *, then there are two possibilities
            // a) We consider current character of second string
            // b) We ignore current character of second string.
            if (first[0] == '*')
                    return match(first.substr(1), second)
                            || match(first, second.substr(1));
            return false;
}

// A function to run test cases
void test(string first, string second)
{
            match(first, second) ? cout << "Yes" : cout << "No";
}

// Driver program to test above functions
int main()
{
            string first, second;
            cin >> first;
            cin >> second;
            test(first, second); // Yes
    return 0;
}
```