SAMPLE PAPER 3

COMPUTER SCIENCE

*A Highly Simulated Practice Questions Paper for CBSE **Class XII** (Term I) Examination*

Instructions

1. This question paper is divided into three sections.
*2. **Section - A** contains 25 questions (1-25). Attempt **any 20** questions.*
*3. **Section - B** contains 24 questions (26-49). Attempt **any 20** questions.*
*4. **Section - C** contains 6 case study based questions (50-55). Attempt **any 5** questions.*
5. Each question carries 0.77 mark.
*6. There is **no** negative marking.*

Roll No. | | | | | | | |

Maximum Marks : 35
Time allowed : 90 min

Section A

This section consists of 25 questions (1 to 25). Attempt any 20 questions from this section. Choose the best possible option.

1. Which of the following is/are character set?
(a) Alphabets (b) Digits (c) White space (d) All of these

2. Which of the following are the most obvious kind of constants?
(a) Keywords (b) Literals (c) Variables (d) Identifiers

3. These operators are used to make a decision on two conditions.
(a) Logical (b) Arithmetic
(c) Relational (d) Assignment

4. String literals in Python are enclosed by ..... .
(a) double quotes (b) single quotes
(c) Both (a) and (b) (d) None of these

5. Which index number is used to represent last character of string?
(a) – 1 (b) 1 (c) 0 (d) n – 1

6. …… operator checks whether the left value is greater than the one on the right.
(a) Greater than or equal to (b) Greater than
(c) Less than or equal to (d) Less than

7. file. mode attribute is used to
(a) store access mode (b) traverse mode
(c) return access mode (d) All of these

8. This method is used to write a string into the file.
(a) writelines() (b) write()
(c) writerow() (d) writer()

9. Which of the following is/are used as line termination for readline()?
(a) '\n' (b) EOF
(c) Either (a) or (b) (d) None of these

10. Serialization process is also called
(a) pickling (b) unpickling
(c) dump() method (d) load() method

11. This character is used in CSV file.
(a) rb (b) wb (c) rb + (d) x

12. Which of the following is related to working directory?
(a) Relative (b) Absolute (c) Both (a) and (b) (d) None of these

13. The def keyword is followed by the function name and
(a) parameter (b) argument (c) parenthesis (d) classes

14. To add a new element to a list, which command will we use?
(a) `list1.add(8)` (b) `list1.append(8)`
(c) `list1.addLast(8)` (d) `list1.addEnd(8)`

15. What will be the output of the following Python code snippet?
```
d = {"Neha":140, "Paras":145}
print(list(d.keys())
```
(a) ["Neha", "Paras"] (b) ["Neha":140, "Paras":145]
(c) ("Neha", "Paras") (d) ("Neha":140, "Paras":145)

16. If a=(11,12,13,14), a[1:–1] is……
(a) (12,13) (b) [12,13]
(c) (12,13,14) (d) error, tuple slicing does not exist

17. Which one of the following has the same precedence level?
(a) Addition and Subtraction
(b) Multiplication, Division and Addition
(c) Multiplication, Division, Addition and Subtraction
(d) Addition and Multiplication

18. What will be the value of x in the following Python expression?
```
x=int(43.55+2/2)
```
(a) 43 (b) 44
(c) 22 (d) 23

19. Which of the following will run without error?
(a) `round(65.8)` (b) `round(1265.983,2,4)`
(c) `round()` (d) `round(6529.123,2,1)`

20. Which of these definitions correctly describe a module?
(a) Denoted by triple quotes for providing the specification of certain program elements
(b) Design and implementation of specific functionality to be incorporated into a program
(c) Defines the specification of how it is to be used
(d) Any program that reuses code

21. Which of the following is not a valid namespace?
(a) Global namespace (b) Public namespace (c) Built-in namespace (d) Local namespace

22. What is the use of tell() method in Python?
(a) Tells you the current position within the file
(b) Tells you the end position within the file
(c) Tells you the file is opened or not
(d) None of the above

23. Which of the following mode will refer to binary data?
(a) r (b) w (c) + (d) b

24. Correct syntax of file.writelines() is
(a) `file.writelines(sequence)` (b) `fileObject.writelines()`
(c) `fileObject.writelines(sequence)` (d) None of these

25. Which of the following is not a valid attribute of a file object (fp)?
(a) fp.name (b) fp.closed
(c) fp.mode (d) fp.size

Section B

This section consists of 24 questions (26 to 49). Attempt any 20 questions.

26. Find the output of the following code.

```
dict = {}
a, b, c = 15, 25, 35
dict[a, b, c] = a + b - c
a, b, c = 25, 20, 40
dict[a, b, c] = a + b - c
print(dict)
```

(a) {(15, 25, 35) : 5, (25, 20, 40) : 5}
(b) {(15, 25, 35), (25, 20, 40)}
(c) {15, 25, 35, 25, 20, 40}
(d) Error

27. What will be printed on the console by the below code?

```
x, y, z, k, j = 9, 7, 2, 2, 1
m = 5
if (x > y):
      if (y > z and y > k):
            m = m - 1
      else:
            k = k + 1
```

```
else:
       j = j + 1
print("m =", m)
print("k =", k)
print("j =", j)
```

(a) m = 2
k = 4
j = 1

(b) m = 4
k = 2
j = 1

(c) m = 1
j = 2
k = 4

(d) m = 2
k = 4
j = 3

28. Write the output of the following code.

```
number = 2
def Fun ():
    number = 5
    print("Number(s):")
    print(number)
Fun()
print(number)
```

(a) 5
2

(b) Number
5
2

(c) Number(s)
5
2

(d) number(s)
2
5

29. What will be the output of the following Python code?

```
i = 1
while True:
  if i%5 == 0:
     break
  print(i)
  i += 1
```

(a) 1
2
3
4

(b) 1
2
3

(c) 1
2

(d) Error

30. What will be the output of the following Python code?

```
str1 = "be honest"
for i in str1.split():
    print(i, end=", ")
```

(a) b, e, , h, o, n, e, s, t,

(b) b, e,, h, o, n, e, s, t

(c) be, honest,

(d) Error

31. What will be the output of the following Python code?

```
a=[13,6,77]
a.append([87])
a.extend([45,67])
print(a)
```

(a) [13,6,77, [87], 45, 67]

(b) [13,6,77,87,45,67]

(c) [13,6,77,87,[45,67]]

(d) [13,6,77, [87], [45,67]]

32. What will be display by this file?

```
import os
f='computer.txt'
p=os.path.abspath(f)
print(p)
```

(a) File name
(b) Complete path
(c) File name with directory name
(d) File name with folder name

33. What will be the output of following code?

```
def count():
    v=0
    f=open("para.txt", "r")
    N=f.read()
    M=N.split()
    for i in M:
          if (i!="a" or i!= "e" or i!="i" or i!="o" or i!="u"):
             print(i)
             v=v+1
    f.close()
    print(v)
```

If content of file ''para.txt'' is

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(a) 11 (b) 7 (c) 18 (d) 19

34. What will be the output of following code?

```
def Readfile():
     i=open("Employee.dat","rb+")
     x=i.readline()
     while(x):
     l=x.split(':')
     if(20000>=float(l[2])<=40000):
         print(x)
     x=i.readline()
```

(a) Display details of employees who are earning between 20000 and 40000 (both are exclusive)
(b) Display details of employees who are earning between 20000 and 40000 (both are inclusive)
(c) Display details of employees who are earning between 20000 and 40000 (only 20000 inclusive)
(d) Display details of employees who are earning between 20000 and 40000 (only 40000 inclusive)

35. Evaluate the following expression and identify the correct answer.

$15 - (2 + 7) * 5 + 3 * *2 * 6 - 4 + 2$

(a) 18 (b) 20 (c) 22 (d) 35

36. What will be the output of the following Python code snippet?

```
a = 'hello'
for i in range(len(a)):
    a[i].upper()
print(a)
```

(a) hello (b) HELLO
(c) Hello (d) Error

37. What will be the output of the following Python code?

```
tup1=[(56, 89),(36,66),(88, 69)]
s = tup1.sort()
print(s)
```

(a) [(36, 66), (56, 89), (88, 69)]
(b) [(56, 89),(36,66),(88, 69)]
(c) Error because tuples are immutable
(d) Error because tuple has no sort attribute

38. What will be the output of the following Python code?

```
def sum(*args):
   '''Function returns the sum of all values'''
     r = 0
     for i in args:
              r += i
     return r
print(sum.__doc__)
print(sum(5, 8, 3))
print(sum(2, 6, 3, 4, 1))
```

(a) None (b) 16 (c) None (d) Error
16 16 16
16

39. What will be the output of the following Python code?

```
x=2
def test():
      global x
      x=x+1
test()
print(x)
```

(a) 2 (b) 1 (c) 0 (d) 3

40. What will be the output of the following Python code?

```
i = 0
while i < 10:
    print(i)
    i += 2
    if i == 8:
        break
else:
    print(0)
```

(a) 0
2
4
6

(b) 1
2
4
6

(c) 0
2
4
6
8

(d) 1
2
3
4
5
6
7
8

41. What is the output of the following code snippet?

```
import random
AR=[20,30,40,50,60,70];
FROM=random.randint(1,3)
TO=random.randint(2,4)
for K in range(FROM,TO+1):
      print(AR[K],end="#")
```

(a) 10#40#70#
(b) 30#40#50#
(c) 50#60#70#
(d) 40#50#70#

42. What is the output of the following code snippet?

```
To=5
for K in range(0,To) :
    if K%4==0:
       print (K*4)
    else:
       print (K+3)
```

(a) 4
5
6
16

(b) 0
4
6
16

(c) 0
4
5
6
16

(d) 5
6
16

43. Find and write the output of the following Python code.

```
a=10
def call():
    global a
    a=15
    b=20
print(a)
call()
```

(a) 20
(b) 35
(c) 10
(d) 15

44. What will be the output of the following code?

```
def DISPLAYWORDS():
    c=0
    file=open('STORY.TXT','r')
    line = file.read()
     word = line.split()
     for w in word:
```

```
            if len(w)<4:
               print(w)
    file.close()
```

If the content of file "Story.txt" is

A computer is a machine that can be programmed to carry out sequences of arithmetic or logical operations automatically.

(a) 9 (b) 10
(c) 19 (d) 11

45. What will be the output of the following Python code?

```
a=[18,23,69,[73]]
b=list(a)
a[3][0]=110
a[1]=34
print(b)
```

(a) [18,34,69,[110]] (b) [18,23,69,[73]]
(c) [18,23,69,[110]] (d) [18,34,69,[73]]

46. What will be the output of the following Python code?

```
list1=[9, 5, 3, 5, 4]
list1[1:2]=[7,8]
print(list1)
```

(a) [9,5, 3, 7, 8] (b) [9, 7, 8, 3, 5, 4]
(c) [9,[7, 8], 3, 5,4] (d) Error

47. What will be the output of the following Python code snippet?

```
dic1 = {1:'One', 2:'Two', 3:'Three'}
del dic1[1]
dic1[1] = 'Four'
del dic1[2]
print(len(dic1))
```

(a) 0
(b) 2
(c) 1
(d) Error as the key-value pair of 1:'One' is already deleted

48. What will be the output of following code?

```
f=open("student.txt","r")
str=f.read()
s=len(str)
print (s)
f.close()
```

If the content of file "student.txt" is

Welcome to Arihant!

(a) 20 (b) 18 (c) 19 (d) 17

49. What will be the output of the following code?

```
t1=(2, 5,[1,2], 9)
t1[2][1]=11
print(t1)
```

(a) (2, 5, [11, 2], 9) (b) (2, 5, [1, 2], 11) (c) (2, 5, [1, 11], 9) (d) Error

Section C

(Case Study Based Questions)

This section consists of 6 questions (50 to 55). Attempt any 5 questions.

Riya write a program to open a file 'status.txt' to read each character and print the occurrence of alphabets A and N.

```
def countAN():
    f = open("status.txt", "r")
    a = 0
    n = 0
    while ____ :                          #line 1
       l = f.readline( )
       if not l :
       ____                               #line 2
       for i in ____ :                    #line 3
            if (i = = 'A' or i = = 'a'):
                 a = + 1
       elif (____):                       #line 4
          n = ____                        #line 5
print ("A :", a)
print ("N :", n)
____ . close ()                           #line 6
```

50. Which condition will be satisfy in while loop in line 1 as marked?

(a) Flag (b) False (c) True (d) None

51. Choose the correct option to fill the blank in line 2 as marked.

(a) continue (b) break (c) False (d) True

52. Choose the correct option to fill the blank in line 3 as marked.

(a) l (b) f (c) n (d) a

53. Which condition will be used in elif ?

(a) i == N or i == n (b) i == 'N' or i == 'n'

(c) i = 'N' or i = 'n' (d) i == 'N' and i == 'n'

54. Which value will be assign to variable n in line 5 as marked?

(a) n – 1 (b) n + 1 (c) n (d) n*n

55. Identify the missing code to close the file in line 6 as marked.

(a) l (b) n (c) f (d) file

Answers

1. (d)	**2.** (b)	**3.** (a)	**4.** (c)	**5.** (a)	**6.** (b)	**7.** (c)	**8.** (b)	**9.** (c)	**10.** (a)
11. (d)	**12.** (a)	**13.** (c)	**14.** (b)	**15.** (a)	**16.** (a)	**17.** (a)	**18.** (b)	**19.** (a)	**20.** (b)
21. (b)	**22.** (a)	**23.** (d)	**24.** (c)	**25.** (d)	**26.** (a)	**27.** (b)	**28.** (c)	**29.** (a)	**30.** (c)
31. (a)	**32.** (b)	**33.** (a)	**34.** (b)	**35.** (c)	**36.** (a)	**37.** (a)	**38.** (a)	**39.** (a)	**40.** (a)
41. (b)	**42.** (c)	**43.** (d)	**44.** (a)	**45.** (c)	**46.** (b)	**47.** (b)	**48.** (c)	**49.** (c)	**50.** (c)
51. (b)	**52.** (a)	**53.** (b)	**54.** (b)	**55.** (c)					

SOLUTIONS

1. Character set is a set of valid characters that represents any digit, alphabet and special symbol.

2. Literals are the most obvious kind of constants that refer to fixed values which may not alter during execution of program.

3. Logical operators are used to make a decision on two conditions. These are typically used with boolean values.

4. String literals in Python are enclosed by single and double quotes.

5. –1 index number is used to represent last character of string.

6. Greater than operator checks whether the left value is greater than the one on the right.

7. file.mode attribute is used to return access mode in which file was opened.

8. write() method takes a string and writes it in the file. This method does not add a newline character to the end of the string.

9. For readline(), a line is terminated by \n (new line) and EOF (End of File).

10. Serialization process is called pickling. Pickling is way to convey a Python object into a character stream.

11. x is a access mode.This character is used to create a new file in CSV.

12. A relative path is a path that is relative to the working directory location on your computer. It does not start with a leading forward slash.

13. The def keyword is followed by the function name and parenthesis.

14. We use the function append() to add an element to the list.

15. The output of the code is a list containing only keys of the dictionary d, with the help of d.keys () method.

16. Here is tuple slicing exist. So, a[1:– 1] returns (12,13).

17. "Addition and Subtraction" are at the same precedence level. Similarly, "Multiplication and Division" are at the same precedence level. However, ''Multiplication'' and ''Division'' operators are at a higher precedence level than ''Addition'' and ''Subtraction'' operators.

18. The given expression is an example of explicit conversion. It is evaluated as int(43.55+ 1) = int(44.55) = 44. Hence, the result of this expression is 44.

19. round () returns a floating point number that is rounded version of the specified number.
Syntax `round (number,digit)`
So,round (65.8) will run with error.

20. The term "module" refers to the implementation of specific functionality to be incorporated into a program.

21. During a Python program execution, there are as many as three namespaces–built-in namespace, global namespace and local namespace. So, public is not a valid namespace.

22. The tell() method tells you the current position within the file; in other words, the next read or write will occur at that many bytes from the beginning of the file.

23. Mode meaning is as explained below:
r Reading
w Writing
a Appending
b Binary data
+ Updating

24. The method writelines() writes a sequence of strings to the file. The sequence can be any iterable object producing strings, typically a

list of strings. There is no return value.
Syntax `fileObject.writelines(sequence)`

25. fp.size is not a valid attribute of a file object (fp). Because it has not been implemented.

26. dict is representing the dictionary.
The value for key (15, 25, 35) is

$$a + b - c = 15 + 25 - 35 = 5$$

The value for key (25, 20, 40) is

$$a + b - c = 25 + 20 - 40 = 5$$

where, (15, 25, 35) and (25, 20, 40) are keys and 5 and 5 are values.

27. if (9 > 7) true
if (7 > 2 and 7 > 2) true
m = 5 – 1 = 4
So, output is m = 4
k = 2
j = 1

28. When Fun() will be called, it display the value of number is 5.
After Fun(), the value of number will display 2.

29. Variable i starts from 1 and check while condition. It prints number from 1, 2, .. and so on, but when value of i is completely divided by 5, then loop will be terminate.
So, output is 1
2
3
4

30. Variable i takes the value of one word at a time.
It will print one word then comma and then second word and so on.

31. The append function simply adds its arguments at end to the list as it is while extend function extends its arguments and later appends it.

32. abspath() method returns a normalised absolutised version of the pathname path that means returns the complete path name of the data file.

33. This program counts the alphabets which are not vowels (i.e. a, e, i, o, u). So, this program counts the consonants.

34. This code opens the file "Employee. dat" in read mode and display details of employees who are earning between 20000 and 40000 (both are inclusive).

35. 15 – (2 + 7) * 5 + 3 **2 *6 – 4 + 2
= 15 – (9) *5 + 3 **2 *6 – 4 + 2
= 15 – 9 *5 + 9 *6 – 4 + 2
= 15 – 45 + 9 *6 – 4 + 2
= 15 – 45 + 54 – 4 + 2
= 15 + 9 – 4 + 2
= 15 + 5 + 2
= 20 + 2
= 22

36. Changes do not happen in-place, rather a new instance of the string is returned.

37. A list of tuples is a list itself. Hence, items of a list can be sorted.

38. We use the * operator to indicate, that the function will accept arbitrary number of arguments. The sum() function will return the sum of all arguments. The first string in the function body is called the function documentation string. It is used to document the function. The string must be in triple quotes.

39. Since 'x' has been declared a global variable, it can be modified very easily within the function. Hence, the output is 3.

40. **Iteration 1**
```
while (0<10) : True
prints 0
      i=0+2=2
      if (0==8) : False
```
Iteration 2
```
while (2<10) : True
prints 2
      i=2+2=4
      if (4==8) : False
```
Iteration 3
```
while (4<10) : True
prints 4
       i=4+2=6
       if (6==8) : False
```
Iteration 4
```
while (6<10): True
prints 6
       i=6+2=8
       if (8==8) : True
          break
```
So, output is 0
2
4
6

41. Range of for loop will start from index number 1 to index number 4, i.e. elements 30 to 60. So, the value AR[K] should be between 30 and 60.

42. **Iteration 1** `if (0% 4 = = 0) : true`
`prints 0`
Iteration 2 `if (1% 4 == 0) : true`
`prints 4`
Iteration 3 `if (2% 4==0) : false`
`prints 5`
Iteration 4 `if (3% 4==0) : false`
`prints 6`
Iteration 5 `if (4% 4==0) : true`
`prints 16`
So, output is 0
4
5
6
16

43. When function call() will be called, then value of 'a' prints 15 which defined as global.

44. This program opens a file 'STORY.TXT' in read mode. It counts those words whose length less than 4 because here is a condition len(w)<4.

45. In given code, the copy is a type of shallow copy and only changes made in sub-list is reflected in the copied list, which replaced 73 by 110.

46. In the piece of code, slice assignment has been implemented. The sliced list is replaced by the assigned elements in the list.

47. After the key-value pair of 1:'One' is deleted, the key-value pair of 1:'Four' is added.

Then key-value pair of 2: 'Two' is deleted.

So, length of present dictionary will be 2.

48. This code opens the file 'student.txt' in read mode and read the data word-to-word.

It will find the length of file.

49. t1 is a tuple in which [1, 2] is a nested tuple. t1 [2] [1] represents the second element of nested tuple, which will replaced by 11.

50. Correct option to satisfy while condition is True.

51. When if condition becomes true, then it will terminate with break statement.

52. for loop will be iterate till l, which stores the data of file 'status. txt' line-by-line.

53. According to question, print occurrence of alphabets A and N, condition for A is already given in if, so we will use condition for N in elif .

54. Value of n will be incremented by one, when elif condition becomes true.

55. To close the file, syntax is

```
fileobject.close()
```

In given code, fileobject is f, so missing code will be f.