

O. P. JINDAL SCHOOL, SAVITRI NAGAR
Annual Examination (2023 – 2024)

SET -B

Class: XI
Subject: Computer Science (083)

MM:70
Time: 3 Hr

(Fifteen Minutes Extra will be given for reading the Question Paper.)

General Instructions:

1. This question paper contains five sections, Section A to E.
2. All questions are compulsory.
3. Section A has 18 questions carrying 01 mark each.
4. Section B has 07 Very Short Answer type questions carrying 02 marks each.
5. Section C has 05 Short Answer type questions carrying 03 marks each.
6. Section D has 03 Long Answer type questions carrying 05 marks each.
7. Section E has 02 questions carrying 04 marks each. One internal choice is given in Question no 34 against part (iii) only
8. All programming questions are to be answered using Python Language only.

SECTION A

Q. No	Each Question contains 1 Mark	Marks
	State True or False	1
1	A cache memory is a type of RAM	
2	The binary equivalent of the octal number 13.54 is..... (a) 1011.1011 (b)1001.1110 (c) 1101.1110 (d) None of these	1
3	Mr. Gopal found that the following program snippet is not working due to some error. Read the below code carefully.	1

Help him to identify the type of error.x=10

y=0.

y=x/2

x='day'

y=x/2

Identify the type of error

- (a) Name error (b) key error (c) type error (d) No error

- 4 Predict the output: 1
print(2* ('NO' + 3* '!'))
(a) NONO!!! (b) NO!!!NO (c) NO!!!NO!!! (d) None of these
- 5 You don't have to pay for python and you can view its source code too. It means Python 1
is
(a) Free and Open source software (b) OSS
(c) Freeware (d) Shareware
- 6 The input() returns the read value as oftype 1
(a) Integer (b) String (c) Numeric (d) complex
- 7 Goutham is a new learner for computer language and he is aware of some concepts 1
regarding societal impacts. But he is unable to get the knowledge regarding a person who
breaks into a computer system to get illegal access to the information stored there.Help
him to identify the apt option given below.
a) Cracker b) Hacker c) Information warriors d) virus programmers
- 8 Which of the following operators has the highest precedence 1
(a) not (b). % (c) and (d).() (e) **
- 9 An empty /null statement in python is 1
(a) go (b) .pass (c) break (d) ;
- 10 What values are generated when the function range (6, 0,-2) is executed? 1
(a) [4,2] (b) [4,2,0] (c) [6,4,2] (d) [6,4,2,0] (e) [6,4,2,0,-2]
- 11 Which one of the following is an example of e-waste? 1
a) Nuclear wastes, medical wastes, toxic industrial wastes, etc.
b) Plastic bags, cardboard boxes, corroded metals, etc.
c) Beverage cans, packaged boxes, plastic bottles, etc.
d) Sensors, alarms, sirens, TV etc.
- 12 Which function/method should be used to convert the string 'Python is easy' to 'Python 1
Is Easy'
(a) title() (b) capitalize() (c) isupper() (d) upper()

- 13 What will be the output of the following python code?
`t1=(5,)`
`t2=t1*2`
`print(len(t1))`
 (a) 0 (b) 2 (c) 1 (d) Error 1
- 14 Which of the following function will return the key, value pairs of the dictionary?
 (a) Keys (b) items() (c) ..values() (d) All of these 1
- 15 Components that provide internal storage to the CPU is: 1
 (a) Registers (b) Program Counters (c) Controller (d) Internal Chips
- 16 Which of the following is not a cyber crime? 1
 (a) Scam (b) Phishing (c) Child pornography (d) Downvote a social media post
- Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as
- (a) Both A and R are true and R is the correct explanation for A
 (b) Both A and R are true and R is not the correct explanation for A
 (c) A is True but R is False
 (d) A is false but R is True
- 17 Assertion (A) : Digital footprint is refers to the trail of data you leave when using the internet. 1
 Reason (R) : While online, all of us need to be aware of how to conduct ourselves, how best to relate with others and what ethics, morals and values to maintain.
- 18 Assertion (A) – In python the dictionary is immutable 1
 Reasoning (R) – In dictionary the data are stored as the key value pairs enclosed within the curly braces

SECTION B

- 19 What is Cache memory? Write any two advantages of Cache memory 2
- 20 Convert the following: 2
 (a) $(3475)_8$ to binary
 (b) $(C2F)_{16}$ to Octal
- OR**
- Convert $(43)_{10}$ = binary
- 21 Identify the valid keywords : 2
 Pass, while, false, If, or, for, breaks, in
- 22 What do you understand by plagiarism? Mention any two ways to avoid plagiarism 2

- 23 Write the corresponding python expression for the following mathematical expression 2
(a) $\sqrt{a^2+b^2+c^2}$
(b) $2-ye^{2y} +4y$

- 24 Explain how e-waste creates environmental and health problems. What are the different methods for e-waste disposal? 2

OR

What is Intellectual Property? How Intellectual Property Right can be legally Protected?

- 25 (i) Predict the output:
x,y=2,6
x,y=y,x+2
print(x,y) 1

- (ii) Mr. Hrithwik is trying to create a python code using for loop. But the snippet having some errors and unable to execute it. Rewrite the code by underlining the correction/s. 1

```
val=30
for val in range(0,10) :
    if val%4=0 :
        print (val*4)
Elseif val%5==0:
    print (val+3)
else :
    print(val+10)
```

SECTION C

- 26 Write a program in python to calculate the amount payable if money has been lent on Simple Interest (SI). 3
Simple Interest can be calculated by $SI = (P \times T \times R)/100$ Where, P is the principal amount T is the time and R is the rate.
P,R and T are to be given as input to the program.

OR

Draw a flow chart to find the sum of first 50 natural numbers

- 27 (i) Identify the types of errors (if any) after execution of the following code:
X='welcome'
print(X[8]) 3
- (ii) D1={'10':"aa", '20':"bb", '30':"cc"}
print(D1['3'])
- (iii) l1=[10,20]

```
l2=[30,40]
print(l1*l2)
```

28 Write a Program in python to calculate factorial of a given number using while loop 3

29 Mrs. Jayashree has recently shifted to a new city and school. She does not know many people in her new city and school. But all of a sudden, someone is posting negative, demeaning comments on her social networking profile etc. She is also getting repeated mails from unknown people. Every time she goes online, she finds someone chasing her online. 3

- i. What is this happening to Mrs. jayashree?
- ii. What immediate action should she take to handle it?
- iii. Is there any law in India to handle such issues? Discuss briefly.

30 Draw a logic circuit diagram for the Boolean Expression: 3
 $A=UV' .(W' +Z)$

OR

State De-Morgan's Law and verify one of the laws using Truth Table

SECTION D

31 Write a program in python to produce the following output using for loop 5

```
*
* *
* * *
* * * *
* * * * *
```

OR

Write a Program in python that print Fibonacci series ' first 20 numbers.
Some initial elements are: 0112358

32 Write a program to calculate BMI of a person after inputting its weight in kgs and height in meters and then print the Natural status as per the following table:

Natural status	BMI cut off
Underweight	Less than 18.5
Normal	18.5 -24.9
Overweight	25-29.9
Obese	Greater than or equal to 30

33 (i) Predict the output of the following codes : 3
a=110
while a >100:

```
print(a)
a=a-2
```

- (ii) Snigdha wrote the Program code in python that accept three integers and print the largest of the three using if statement only. But she is unable to complete the code. Help her to complete the following program in python.

```
x=y=z=0
x=float(input('enter the first number'))
y=float(input('enter the second number'))
z=float(input('enter the third number'))
max=x
if( y > .....):
max = .....
if(..... > max):
    max= z
print('Largest number is',.....)
```

2

OR

- (i) Write the output of the following codes

```
count=0
while(count <10):
    print('hellow')
    count+=1
```

- (ii) Arun wrote the Program code in python to print sum of natural numbers between 1 to 7 progressively. But he is unable to complete the code. Help him to complete the following program in python

```
sum=0
for i in range( .....):
sum=.....
print("sum of natural numbers <=" ,....., "is" ,.....)
```

SECTION E

- 34 (a) Explain digital Property? (2 marks) 4
(b) What are the threats to digital properties? (2 Marks)
OR (Option for part (b) only)
(b) What are the different ways of protecting digital properties? (2 Marks)
- 35 (a) What is break statement? Illustrate its use with suitable example? 2 +2
(b) What is Continue statement? Illustrate its use with suitable example?