INSTRUCTIONS:

1. **All Questions are compulsory**
2. **Programming Language: Python**
3. **Paper is divided into 3 sections i.e MCQ, Application Based & Programming Practice**
4. **Section A - MCQ Section Contains 35 Questions and Carries 1 mark each**
5. **Section B - Application Based Contains 10 Questions Carries 2 mark each**
6. **Section C - Programming Practice contains 5 Questions Carries 3 marks each**

SECTION A (MULTIPLE CHOICE QUESTIONS) - 35 MARKS

Q1. Which of the following function will raise an error, if the given substring is not found in the string   1
   a) find()   b) index()
   c) replace()   d) all of these

Q2. Select the correct output of the following String operations: 1
   str1="My roll no is 12."
   print(str.isalnum())
   a) True   b) False
   c) Error   d) No output

Q3. Consider the loop given below: 1
   for i in range(10,5,-3):
         print(i)
   How many times will this loop run
   a) 3   b) 2
   c) 1   d) Infinite

Q4. What is the output produced when this code executes?   1
   i=1
   while(i<=7):
     i*=2
   print(i)
   a) 8   b) 16
   c) 4   d) 14

Q5. The capacity of 3.5 inch floppy disk is   1

   a) 1.40MB   b) 1.44MB
   c) 1.40GB   d) 1.44 TB

Q6. ASCII stands for   1

   a) American Stable Code for   b) American Standard Case for
   International Interchange   Institutional Interchange
   c) American Standard Code for   d) American Standard Code for
   Information Interchange   Interchange Information

Q7. The computer size was very large in   1

   a) First Generation   b) Second Generation
   c) Third Generation   d) Fourth Generation

Q8. $11010011_2 = (?)_{16}$ 1

   a) D3   b) B3
   c) A3   d) D2

Q9. In Boolean Algebra , A+ A= -----------   1

   a) A   b) 1
   c) 0   d) None of these

Q10. In Boolean Algebra , A . A=-----------   1

   a) A2   b) A
   c) 2A   d) 1

Q11. In Boolean Algebra A+ AB =-----------   1

a) B
b) A
c) AB
d) A+B

Q12. What is pseudocode? 1
a) A diagrammatic representation of a set of instructions
b) An algorithm written out in words
c) A very specific programming language used by all computers
d) All of these

Q13. What shape represents a decision in a flowchart 1

a) A diamond
b) A rectangle
c) An oval
d) None of these

Q14. The ------------- mode of Python gives instant result of typed statement 1

a) Interactive
b) Script
c) Combination of Interactive and script mode
d) All of these

Q15. Python is a/an--------- language 1

a) High level
b) Object Oriented
c) Procedural
d) all of these

Q16. Escape Sequence are treated as---------------- 1

a) Strings
b) Characters
c) Integers
d) None of these

Q17. Value 0.000615 is equivalent to 1

a) 615E3
b) 615E-3
c) 0.615E3
d) 0.615E-3

Q18. To convert the read value through input() into a floating point numbers.------() is used 1
a) floating
b) float
c) int
d) integer

Q19. The operator used to check if both the operands reference the same object memory, is the------------ operator 1
a) in
b) is
c) id
d) ==

Q20. In Python, a variable is assigned a value of one type, and then later assigned a value of a different type. This will yield 1
a) Warning
b) Error
c) None
d) No Error

Q21. What will be the value of y after following code fragment is executed ? 1
x = 10.0
y = (x < 100.0) and x >= 10
a) 10, True
b) True False
c) False, True
d) Error

Q22. What will be the result of the expression 7 or 3 ? 1

a) 3
b) 10
c) 7
d) None of the above

Q23. What will be the result of the expression 'a' or '' ('' is an empty string) ? 1

a) 'a'
b) ' '
c) 1
d) 0

Q24. What type of error is returned by the following statement? 1
print(eval(13))
a) SyntaxError
b) Type Error
c) Value Error
d) No Error in this statement

Q25. In Python , which of the following will create a block in a compound statement. 1

a) colon
b) statements indented at a lower, same level
c) indentation in any form
d) { }

Q26. What does the following Python program display: 1
x=3

```
if x==0:
    print('Am i here',end='')
elif x==3:
    print('Or here?',end='')
else:
    pass
print('Or over here?')
```

a) Am I here
b) Or here
c) AM I here Or here?
d) Or here? Or over here?

Q27. Function range(3) will yield an iterable sequence like ------------------   1

a) range(1,3)
b) range(0,3)
c) range(0,3,1)
d) range(1,3,0)

Q28. How many times does the following code execute?   1

```
x=1
while(x<=5):
    x+=1
print(x)
```

a) 6
b) 1
c) 4
d) 5

Q29. Which of the following is False regarding loops in Python?   1

a) Loops are used to perform certain tasks repeatedly.

b) While loop is used when multiple statements are to executed repeatedly until the given condition becomes False

c) While loop is used when multiple statements are to executed repeatedly until the given condition becomes True.

d) for loop can be used to iterate through the elements of lists

Q30. The continue statement can be used in?   1

a) while loop
b) for loop
c) do-while
d) Both A and B

Q31. What will be the output of given Python code?   1

```
n=7
c=0
while(n):
    if(n>5):
        c=c+n-1
        n=n-1
    else:
        break
print(n)
print(c)
```

a)2,7
b) 6,5
c) 3,9
d) 5,11

Q32. Which of the following Python code will give different output from the others?   1

a) for i in range(0,5):
       print(i)
b) for j in [0,1,2,3,4]:
       print(j)
c) for k in [0,1,2,3,4,5]:
       print(k)
d) for l in range(0,5,1):
       print(l)

Q33. Which of the the following functions will returns a list containing all words of the string?   1

a) find()
b) partition()
c)index()
d) split()

Q34. str1='mission 999'   1
str2='999'
print(str1.isdigit(), str2.isdigit())

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```

a) False,True              b) False,False

c)True False             d) True true

**Q35.** Which of the following function will raise an error if the given substring is not found in the function to remove the space?    1

a) lstrip                      b) rstrip

c) strip                      d) all of these

## SECTION B (APPLICATION BASED QUESTIONS) – 20 MARKS

**Q36.** Draw the logic diagram for the following Boolean expression    2

i) **A'BC+AB'C+ABC'**

ii) **AB+B'C**

**Q37.** Predict an output of the following code:    2

```
x=10
y=0
while x>y:
    print(x,y)
    x=x-1
    y=y+1
```

**Q38.** Convert $(FACE)_{16}$ to $(?)_8$    2

**Q39.**    2

```
s='987654321'
print(s[-1],s[-3])
print(s[-3],s[:-3])
```

Find an output of the following code

Q40. Draw a flow chart to find the cube of any number.   2

Q41. Suggest appropriate function for the following tasks: 2

  (i).   To find the occurrence of a string within another string.

 (ii).   To remove all white spaces from the beginning of a string

Q42. How is Break statement different from continue.   2

Q43. Write the following expression in Python: 2

i) $\pi r^2 h$

ii) $a^{-n}=1/a^n$

Q44. Find out the errors in the code fragment: 2

i)

```
y=x+5
print(x,y)
```

ii)

```
print(x=y=5)
```

Q45. What do you mean by Cross platform software?   2

SECTION C (PROGRAMMING PRACTICE)- 15 MARKS

Q46. Write a program to obtain principal amount, rate of interest from user and computer simple interest.   3

Q47. Write a program to check given year is leap year or not.   3

Q48. Write a program which consider any string and perform the following: 3

1. Search any given substring

2. Find the index of substring from which it starts.

Q49. Write a program which consider any string and count no of upper case character and lower case character present in it.   3

Exmaple. If a string is ' sAmpLe ProGram' then

No of upper case characters: 4,

No of lower case characters: 9

Q50. Write a program to find the area of rectangle.   3