

**General Instruction:**

1. This question paper contains five sections, Section A to E.
2. All questions are compulsory.
3. Section A have 18 questions carrying 01 mark each.
4. Section B has 07 Very Short Answer type questions carrying 02 marks each. Mention examples for each selected question.
5. Section C has 05 Short Answer type questions carrying 03 marks each.
6. Section D has 02 questions carrying 04 marks each.
7. Section E has 03 questions carrying 05 marks each.

All programming questions are to be answered using Python Language only

**SECTION A – 18 MARKS**

- |            |   |   |
|------------|---|---|
| <b>Q1.</b> | Python code can run on a variety of platforms, it means Python is a ____ language.  | 1 |
|            | <div style="display: flex; justify-content: space-between;"> <span>(a) Graphical</span> <span>(b) Cross-platform</span> </div> <div style="display: flex; justify-content: space-between;"> <span>(c) independent</span> <span>(d) all of these</span> </div>                                     |   |
| <b>Q2.</b> | Data items having fixed value are called ____.  | 1 |
|            | <div style="display: flex; justify-content: space-between;"> <span>(a) Identifiers</span> <span>(b) functions</span> </div> <div style="display: flex; justify-content: space-between;"> <span>(c) Keywords</span> <span>(d) literals</span> </div>   |   |
| <b>Q3.</b> | Which Python built-in function returns the unique number assigned to an object?   | 1 |
|            | <div style="display: flex; justify-content: space-between;"> <span>(a) identity()</span> <span>(b) id()</span> </div> <div style="display: flex; justify-content: space-between;"> <span>(c) refnum()</span> <span>(d) ref()</span> </div>  |   |
| <b>Q4.</b> | Escape sequences are treated as ____.   | 1 |
|            | <div style="display: flex; justify-content: space-between;"> <span>(a) strings</span> <span>(b) characters</span> </div> <div style="display: flex; justify-content: space-between;"> <span>(c) integers</span> <span>(d) none of these</span> </div>   |   |
| <b>Q5.</b> | Which of the following is not an immutable type in Python?  | 1 |
|            | <div style="display: flex; justify-content: space-between;"> <span>(a) String</span> <span>(b) Tuples</span> </div> <div style="display: flex; justify-content: space-between;"> <span>(c) dictionary</span> <span>(d) None of these</span> </div>  |   |
| <b>Q6.</b> | The ____ mode of Python gives instant result of typed statement.  | 1 |
|            | <div style="display: flex; justify-content: space-between;"> <span>(a) Interactive mode</span> <span>(b) Script mode</span> </div> <div style="display: flex; justify-content: space-between;"> <span>(c) Combination of interactive and script modes</span> <span>(d) All of these</span> </div> |   |

- Q7.** What is the value of the expression  $100/25$  ? 1
- (a) 4 (b) 4.0  
(c) 2.5 (d) none of these
- Q8.** Which of the following is an escape sequence for a newline character? 1
- (a) \a (b) \t  
(c) \n (d) \b
- Q9.** The \_\_\_\_\_ construct repeats a set of statements a specified number of times or as long as a condition is true. 1
- (a) selection (b) repetition  
(c) sequence (d) flow
- Q10.** To print the value of a variable, Python uses 1
- (a) Print statement (b) Print() function  
(c) print statement (d) print() function
- Q11.** Function range(3) is equivalent to : 1
- (a) range(1, 3) (b) range(0, 3) (c) range(1, 3, 0) (d) None of these
- Q12.** 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) {}
- Q13.** To convert the read value through input() into a floating point number, \_\_\_\_\_ () is used. 1
- (a) floating (b) float  
(c) int (d) integer
- Q14.** What does the following Python program display? 1
- ```
x = 3  
if x == 8:  
    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?

**Q15.** If the user inputs: 2, what does the following code snippet print ? 1

```

x = float(input())

if(x == 1):

    print("Yes")

elif (x >= 2):

    print("Maybe")

else:

    print ("No")

```

- (a) Yes (b) No  
(c) Maybe (d) Nothing is printed

**Q16.** Python is a/an \_\_\_\_\_ language. 1

- (a) High level (b) difficult  
(c) procedural (d) None of these

Q17 and 18 are **ASSERTION AND REASONING** based questions. Mark the correct choice as

- i. **Both A and R are true and R is the correct explanation for A**
- ii. **Both A and R are true and R is not the correct explanation for A**
- iii. **A is True but R is False**
- iv. **A is false but R is True**

**Q17. Assertion:** In Python, blocks are represented through indentation 1

**Reasoning:** Blocks in Python, are the compound statement

**Q18. Assertion:** Python's pass statement is an empty statement 1

**Reasoning:** An empty statement does nothing

**SECTION B – 14 MARKS**

**Q19.** How are floating constants represented in Python? Mention examples of each type. 2

**OR**

What is the basic difference between implicit type conversion and explicit type conversion? Mention example of each.

**Q20.** What is an expression and a statement? 2

**Q21.** How does a conditional expression affect the result of if statement? 2

**Q22.** What is Dynamic Typing feature of Python? Mention example. 2

**Q23.** What are augmented assignment operators? How are they useful 2

**Q24.** What is the significance of break and continue statements? 2

**Q25.** Find output of the following: 2

```
x = 1
if x > 3 :
    if x > 4 :
        print ("A", end = ' ')
    else :
        print ("B", end = ' ')
elif x < 2:
    if (x != 0) :
        print ("C", end = ' ')
print ("D")
```

**SECTION C – 15 MARKS**

**Q26.** Find an output of the following code: 3

a) for x in range (5):

print (x)

b) for p in range(1, 10) :

print (p)

c) for q in range (100, 50, -10) :

print (q)

**OR**

Predict an output of the following code:

a) x = 10

y = 0

while x > y :

print (x, y)

x = x - 1

y += 1

b) count = 0

while count < 10 :

print ("Hello")

count += 1

**Q27.** "Comments are useful and easy way to enhance readability and understandability of a program." Elaborate with examples. 3

**Q28.** What are three internal key-attributes of a value-variable in Python Explain with example. 3

**Q29.** What do you mean by token in Python? How many types of tokens are allowed in Python? 3

**OR**

What factors guide the choice of identifier in program?

- Q30.** What is the similarity and difference between for and while loop? Mention example of each to support your answer. 3

**SECTION D – 8 MARKS**

- Q31.** i) How does the // operator different from the / operator? 4  
[2+2]
- ii) What are the error types? Which error is very difficult to locate?

- Q32.** i) Write the following mathematical expression in terms of Python expression. 4  
[2+2]

i)  $\frac{1}{3}b^2h$

ii)  $\pi r^2h$

- ii) Predict an output of the following code fragment:

**x,y=20,60**

**y, x, y=x, y-10, x+10**

**print(x,y)**

**OR**

- i) Predict an output of the following code fragment:

**x=40**

**y=x+1**

**x=20,y+x**

**print(x,y)**

- ii) Write following mathematical expression in terms of Python expression.

i)  $\frac{4}{3}\pi r^3$

ii)  $2\pi r$

**SECTION E – 15 MARKS**

- Q33.** i) Write a program to accept percentage from the user and display the grade according to the following criteria: 5  
[3+2]

| Marks           | Grade |
|-----------------|-------|
| More than 90    | A     |
| Between 80 & 90 | B     |
| Between 60 & 80 | C     |
| Below 60        | D     |

- ii) Write a program to input a number and print its first five multiplies.

**OR**

- i) Write a program to calculate the Electricity Bill  
(accept no of unit consumed from user) according to  
the following criteria:

| Unit            | Price           |
|-----------------|-----------------|
| First 100 units | No charge       |
| Next 100 units  | Rs. 5 per unit  |
| Next 200 units  | Rs. 10 per unit |

(For example is unit is 350 then total bill amount is 2000)

- ii) Write a program to find the sum of two numbers

- Q34.** i) Write a program to obtain temperature of 7 days (Monday, Tuesday.... Sunday) and then display average temperature of the week. 5  
[3+2]

- ii) Write a program to find the area of square.  
(**Hints:** Area= side\*side)

- Q35.** i) Write a program to accept the cost price of a bike and display the road tax to be paid according to the following criteria: 5  
[3+2]

| Cost Price               | Tax |
|--------------------------|-----|
| More than 100000         | 15% |
| 50000 – 100000           | 10% |
| Less than Equal To 50000 | 5%  |

- ii) Write a program to find the simple interest based principal amount, rate and time (**Hints: Simple Interest= (principal amount\*rate\*time)/100**)

**OR**

- i) Write a program that asks a user for a number of years, and then prints out the number of days, hours, minutes and seconds in that number of years.

How many years? 10

10.0 years is:

3650.0 days

87600.0 hours

5256800.0 minutes

315360000.0 seconds

- ii) Write a program that reads a number of seconds and print it in forms: mins And second ,  
eg. , 200 second are printed as 3 mins and 20 second .