



INDIAN SCHOOL SOHAR
TERM I EXAMINATION (2022-23)
INFORMATICS PRACTICES (065)

No. of printed pages: 5

CLASS: XI
DATE: 26/09/2022

MAX. MARKS: 70
TIME: 3 HOURS

GENERAL INSTRUCTIONS: -

1. This question paper contains two parts A and B.
2. **Part – A** has two sections:
 - a) **Section-I** consists of 15 questions (1-15). Each question carries 1 mark.
 - b) **Section-II** consists of 2 case studies questions (16-17). Each question carries 4 marks.
3. **Part – B** has three sections:
 - a) **Section-I** consists of 10 questions (18-27). Each question carries 2 marks.
 - b) **Section-II** consists of 4 questions (28-31). Each question carries 3 marks.
 - c) **Section-III** consists of 3 questions (32-34). Each question carries 5 marks.
4. All the questions are compulsory.

PART – A (Section-I consists of 15 questions of 1 mark each)

1. **Statement A:** Control Unit controls and supervises the processing of data.

Statement B: Control Unit is one of the parts of CPU.

- a. Both A and B are correct
- b. Both A and B are incorrect
- c. Statement A is correct and Statement B is incorrect
- d. Statement A is incorrect and Statement B is correct

2. Which of the following is a type of Operating System?

- i. Multiuser OS
- ii. Serial OS
- iii. Time sharing OS
- iv. BIOS

Choose the correct option:

- a. only i b. only iii c. both i and iii d. both ii and iv

3. Which of the following is a special high-speed storage mechanism?

- a. RAM b. ROM
- c. Processor d. Cache memory

4. Which of the following is/are output device(s)?

- i. Monitor ii. Barcode Reader
- iii. Microphone (Mic) iv. Speakers

Choose the correct option:

- a. only i b. only iv c. both i and iv d. both ii and iii

5. Which of the following is equivalent to 1 EB?

- a. 1024 PB b. 1024 GB c. 1024 ZB d. 1024 TB

6. Flash memory is a type of _____ memory.
- a. RAM b. Secondary c. Primary d. All of these
7. Equivalent exponent form of 48095.34 is _____
- i. 4.809534E4 ii. 4809534E-5 iii. 4809534E-2 iv. 4.809534E5
- Choose the correct option:**
- a. only i b. only ii c. both i and iii d. both ii and iv
8. Which of the following is responsible for processing data and instructions?
- a. CPU b. Cache Memory c. RAM d. Input devices
9. Which of the following is an identity operator?
- a. == b. is c. in d. not

10. **Statement A:** A free software is freely accessible and can be freely used.

Statement B: In free software, changes and distribution is not allowed.

- a. Both A and B are correct
- b. Both A and B are incorrect
- c. Statement A is correct and Statement B is incorrect
- d. Statement A is incorrect and Statement B is correct
11. Which of the following is/are valid literal(s)?
- i. 18,234
- ii. 4.56E-2.3
- iii. 309.23
- iv. "abc\ xyz"

Choose the correct option:

- a. only ii b. both iii and iv c. only iii d. both i and iii
12. Explain registers.
13. Which of following is **NOT** an example of web browser?
- a. Safari b. Firefox c. Chrome d. CorelDraw
14. **Statement A:** Following expression $33 \% 6 + 12 // 3 - 3 ** 2 + 7 / 2$ returns -0.5
- Statement B:** Operators $/, //, \%, **$ have the same precedence
- a. Both A and B are correct
- b. Both A and B are incorrect
- c. Statement A is correct and Statement B is incorrect
- d. Statement A is incorrect and Statement B is correct
15. The process of locating the place of error, cause of error and correcting the code is _____.
- a. Syntax error b. Exception c. Type conversion d. Debugging

PART – A (Section-II consists of 2 case questions of 4 marks each)

16. Mr. Akash has written a python program. Help him to predict the output, if the input for variables a, b, c and d is given as:
- i. a = 18, b = 9, c = 5, d = 12

ii. `a = 10, b = 8, c = -3, d = 9`

```
a = int(input("a = "))
b = int(input("b = "))
c = int(input("c = "))
d = int(input("d = "))
b, d, a, c = a - 14, b % 5, a - b, (d - b)//2
print(a, b, sep = '-', end='+')
c += (a - b + 2)
d *= (c + 4)
print(c, d, sep = '*')
```

17. Ms. Riya has written python codes as given below. Help her to predict the output of the python code:

i. **If the input of x is 539:**

```
x = int(input('x = '))
y = x % 10 * 100
x //= 10
y += x % 10 * 10
x //= 10
y += x
print(x, y)
```

i. 539 17 ii. 5 935 iii. 5.0 935.0 iv. 539.0 17

Choose the correct option:

a. only iii b. only ii c. both ii and iii d. both i and iv

ii. **If the input for x is 6, y is 4 and z is 8:**

```
x = int(input('x = '))
y = int(input('y = '))
z = int(input('z = '))
x += (z - y)/(y * 2 - z)
print(x)
```

a. TypeError b. ValueError c. ZeroDivisionError d. NameError

iii. **If the input for a is 5 and b is 'Hi':**

```
a = input("a = ")
b = input("b = ")
c = None
print(a and b and c)
print(not c or a and b)
```

i. Hi True ii. 5 False iii. None 'True' iv. None True

Choose the correct option:

a. only i b. only iv c. only ii d. both iii and iv

iv. **If the input of p is 15 and q is 5:**

```
p = int(input("p = "))
q = int(input("q = "))
r = p / q
```

```
s = p // q
print(r is s, r == s)
```

Choose the correct option:

- a. True True b. False, True c. False False d. False True

PART – B (Section-I consists of 10 questions of 2 marks each)

18. Write the disadvantages of Python programming language.
19. Compare and contrast Interpreter and Compiler.
20. What are variables? Write the rules for naming a variable.
21. Write equivalent python expression for the following:
- i. $\frac{|-4a^3|}{x^4 - 4}$
- ii. $3.5 - ze^{3z} + 5z$
22. Write a python program which takes user input for distance in centimeters and converts it into meters and kilometers.
- NOTE:** 1 meter = 100 centimeters and 1 kilometers = 1000 meters
23. What is the role of the main or primary memory in the computer system?
24. Explain ceil and floor functions of math library with appropriate example.
25. How '==' is different from 'is'? Explain with appropriate example.
26. What are comments in programming? List the different types of comments.
27. Differentiate between expression and statement in a program.

PART – B (Section-II consists of 4 questions of 3 marks each)

28. Write a Python program which takes user inputs for outer radius and inner radius of a spherical shell. Find and display the volume of the spherical shell.
- Formula: $\text{Volume} = \frac{4\pi(R^3 - r^3)}{3}$
29. Write a Python program which takes user inputs for principal amount, rate of interest and number of years. Calculate and display the EMI.
- NOTE:** $E = PR(1 + R)^n / ((1 + R)^n - 1)$, where P is principal amount, R is rate of interest and n is number of years and E is EMI.
30. Write equivalent Boolean expression in Python for these conditions:
- i. Batting average is atleast 55.0 and strike rate is above 125.0 and nation is not associate
- ii. Department is sales or purchase and experience is 10 years or above
- iii. Academic point is not less than 450 and maximum academic point is 500 and co-curricular points is above 400 or quota is sports
31. Differentiate between syntax and logical errors in programming with appropriate examples.

PART – B (Section-III consists of 3 questions of 5 marks each)

32. Define the following terms:
- i. System software

- ii. Backup utility
- iii. FLOSS
- iv. Device drivers
- v. System bus

33. Ms. Kinjal has written some Python codes. Help her to determine the output of each program.

- i.

```
S1 = "COMPUTER Science-PYTHON"
print(len(S1), S1[7], S1[-9], S1[6], S1[10], S1[-9])
```
- ii.

```
a = 6
b = -10
c = 4
d = (a * 4 - b) / (c ** 2 - (a + b + 3))
print(d)
```
- iii.

```
x, y, z = True, 0, 3
print(not x and not z or not y and z)
```
- iv.

```
p, q, r = 9, 14, 6
r, p, q = int(q/r), q-p-3, q%r
print(p is not q, q == r, sep='\n')
```
- v.

```
x, y, z = 'Humpty', None, 'Dumpty'
print(y and not x or not y and x and z)
```

34. Predict the output of following codes (if any error then write the type of error):

- i. **If input of a is -45:**

```
import math
a = int(input('Value of a = '))
sq = a - math.sqrt(a)
print(sq)
```
- ii.

```
s1 = 'I'm travelling'
s2 = 'to India!'
print(s1 + s2)
```
- iii.

```
x = 4.5E-3
y = 2.309E1
z = x + y % 10
print(z)
```
- iv.

```
str1 = 'A23-B09-CD5'
print(str1[4], str1[-5], str1[11])
```
- v. **If the input of x is 5:**

```
x = input("x = ")
y = 9
print("x + y = ", x + y)
```