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CLASS: XI Sec _____

COMPUTER SCIENCE

MM. 40

St Name: _____

Examination Paper I

Time: 90 Mins

GENERAL INSTRUCTIONS:

1. The paper is divided into 4 Sections- A, B, C and D.
2. Section A, consists of 15 questions (1 to 15). Each question carries 1 Mark.
3. Section B, consists of 4 questions (16 to 19). Each question carries 2 Marks.
4. Section C, consists of 4 questions (20 to 23). Each question carries 3 Marks.
5. Section D, consists of 1 question (24) based on case study. Each part carries 1 Mark.
6. All programming questions are to be answered using Python Language only.

Section A

1. What will the following code print?

```
x = 5
print(x + "hello")
```

- a) 10hello b) 5hello c) Error: unsupported operand type(s) for +: 'int' and 'str' d) Hello5

2. How do you comment out a single line in Python?

- a) // This is a comment b) /* This is a comment */ c) # This is a comment d) <!-- This is a comment -->

3. In Python, what is the purpose of the "if" statement?

- a) To define a loop b) To define a function
c) To make a decision or execute code conditionally d) To print output to the console

4. Which of the following is used to print the output in Python?

- a) print () b) read_print () c) get_print () d) user_print ()

5. Which of the following is the correct way to declare a Python list?

- a) my_list = {1, 2, 3} b) my_list = [1, 2, 3] c) my_list = (1, 2,) d) my_list = "1, 2"

6. What is Python?

- a) A high-level language b) A snake species c) A programming tool d) A data structure

7. In Python, a variable must be declared before it is assigned a value.

- a) True b) False c) Only in Functions d) Only in modules

8. What is the result of the expression 3 ** 2 in Python?

- a) 9 b) 6 c) 33 d) 27

9. Which of the following is used to read user input in Python?

- a) input () b) read_input () c) get_input () d) user_input ()

10. What is the value of the expression 100 / 25 ?

- a) 4 b) 4.0 c) 2.5 d) none of these

11. Which of the following is NOT a valid Python variable name?

- a) my_variable b) 123variable c) _variable d) Variable123

12. An empty/null statement in Python is

- a) go b) pass c) over d) ;

13. The order of statement execution in the form of top to bottom, is known as construct.

- a) selection b) repetition c) sequence d) flow

Q 14-15 are ASSERTION AND REASONING based questions. Mark the correct choice as

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- (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. (e) Both A and R are False.

14. **Assertion:** Using the modulo operator (%) with two integers, x and y, where y is not equal to zero, will always give a non-negative result.

Reason: The modulo operator calculates the remainder of the division of x by y. Since y is not equal to zero, the result will always be a non-negative value.

15. **Assertion:** The result of the expression $3 ** 2 ** 2$ is 81.

Reason: The expression is evaluated from right to left, so $2 ** 2$ equals 4, and then $3 ** 4$ equals 81.

Section B

16. What are the keywords? Explain with the help of examples.
17. What is the function of memory? What are its measuring units?
18. Find the complement of (A + BC + D). EF
19. What is the difference between an interpreter and a compiler?

OR

Write a program to find the volume of cylinder $\pi r^2 h$.

Section C

20. What are the various categories of software? Explain them.
21. Convert the following numbers:
(i) $(1948.B6)_{16}$ to Binary (ii) $(75643.5704)_8$ to Hexadecimal (iii) $(423)_{10}$ to Hexadecimal
22. Write a program to read a number n and print n, n^2, n^3, n^4 and n^5 .

OR

Draw the diagram of digital circuit for the function: $F = (X + Y) \cdot (\bar{X} + \bar{Z}) \cdot (Y + Z)$

23. Explain the basic units of the computer? Name the subunits that make up the CPU, and give function of each units.

OR

The radius of a sphere is 7.5 meters. Write a program to calculate its area and volume. Given area of a sphere = πr^2 and volume = $\frac{4}{3} \pi r^3$.

Section D

Case Study based Questions:

```
import _____ #1
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="#")
```

24. (i) What module should be imported to execute the above code #1?
a) math b) random c) pickle d) csv
(ii) What will Be the maximum value of the variables FROM and TO?
a) 3,4 b) 4,3 c) 2,4 d) 4,2
(iii) What will Be the minimum value of the variables FROM and TO?
a) 2,1 b) 1,2 c) 1,3 d) 1, 4

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(iv) What possible outputs(s) are expected to be displayed on screen at the time of execution of the program?

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

(v) AR is a type of :

a) List b) Tuple c) Dictionary d) Integer

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Examination Paper II

Time: 90 Mins

GENERAL INSTRUCTIONS:

1. This question paper contains 2 sections, Section A and B.
2. All questions are compulsory. And internal choice is given in Section B only.

Section A

Solve the following questions. (1 mark each)

1. Advantage/Characteristics of a computer system.

a. Diligence b. Versatility c. Accuracy d. All of the above

2. Type of RAM _____.

a. DRAM b. SRAM c. Both a) and b) d. None of the above

3. The _____ unit holds the data and instructions during the processing.

a. Input b. Output c. Memory d. None of the above

4. _____ helps to convert high level languages to binary languages.

a. Translator b. Reader c. Converter d. None of the above

5. 1024 MB = _____ Bytes.

6. RAM Stands for _____.

7. RAM and ROM are the types of _____ memory.

8. Convert 1MB into bits.

Q9-10 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. (e) Both A and R are False.

9. Assertion (A): The primary memory is volatile memory as all its contents get erased as soon as the power goes off.

Reason (R): The cache memory is also a primary memory.

10. Assertion (A): Not all types of software are system software.

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Reason (R): Application software are designed to carry out operations for a specific application.

Section B

Solve any 5 questions. (2 Marks each)

11. How can computer software be classified?
12. What role does the input unit play in a computer?
13. What is the role of communication processor of a mobile system?
14. What is the function of CPU in a computer system? What are its sub-units?
15. What is the function of main memory? What are the measuring units of memory?
16. What is the role of memory in the functioning of a computer? What types of memory does the computer work with?