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| **SUDITI GLOBAL ACADEMY , MAINPURI**  **HALF YEARLY EXAMINATION**  **CLASS-11TH**  **SUBJECT COMPUTER SCIENCE(083)**  **TIME:03:00 HR MM:70**  **General Instructions:**  **• Please check this question paper contains 35 questions.**  **• The paper is divided into 5 Sections- A, B, C, D and E.**  **• Section A consists of 18 questions (1 to 18). Each question carries 1**  **Mark.**  **• Section B, consists of 7 questions (19 to 25). Each question carries 2**  **Marks.**  **• Section C, consists of 5 questions (26 to 30). Each question carries 3**  **Marks.**  **• Section D, consists of 2 questions (31 to 32). Each question carries 4**  **Marks.**  **• Section E, consists of 3 questions (33 to 35). Each question carries 5**  **Marks.**  **• All programming questions are to be answered using Python Language only.** | | |
| **SECTION A** | | |
| 1 | What is the role of an operating system in a computer system?  a) Managing computer hardware  b) Running applications  c) Generating reports  d) All of the above | 1 |
| 2 | Which memory type is the closest to the CPU and is used to store frequently accessed data?  a) Primary memory  b) Cache memory  c) Secondary memory  d) Tertiary memory | 1 |
| 3 | How many bits are in a byte?  a) 4 bits  b) 8 bits  c) 16 bits  d) 32 bits | 1 |
| 4 | Which logic gate produces a TRUE output only when all inputs are TRUE?  a) OR gate  b) AND gate  c) XOR gate  d) NAND gate | 1 |
| 5 | What is the binary equivalent of the decimal number 25?  a) 11001  b) 11100  c) 10011  d) 10100 | 1 |
| 6 | Which of the following is an example of an application software?  a) Windows OS  b) Microsoft Word  c) Device drivers  d) System utilities | 1 |
| 7 | In the context of Python, what does the term "identifier" refer to?  a) A keyword  b) A variable name  c) A literal value  d) A data type | 1 |
| 8 | Which of the following is a mutable data type in Python?  a) Integer  b) Float  c) List  d) Tuple | 1 |
| 9 | What is the purpose of the "elif" keyword in Python?   1. It represents the "else if" condition in conditional   statements.  b) It is used to define a new function.  c) It is a data type in Python.  d) It is used for string manipulation. | 1 |
| 10 | What is the output for the following code  i=1  while(i<=7):  i\*=2  print(i) | 1 |
| 11 | In Python, what does the "print" function do?  a) It reads user input.  b) It displays text on the screen.  c) It performs mathematical calculations.  d) It defines a variable | 1 |
| 12 | What is the result of the expression 5 + 3 \* 2?  a) 16  b) 11  c) 26  d) 13 | 1 |
| 13 | Which Python data type is used to represent a sequence of  characters?  a) Integer  b) Boolean  c) String  d) List | 1 |
| 14 | What is the purpose of the "for" loop in Python?   1. To execute a block of code repeatedly while a condition is true.   b) To execute a block of code a specified number of times.  c) To define a function.  d) To perform mathematical calculations. | 1 |
| 15 | What is the value of the expression "5 == 5" in Python?  a) True  b) False  c) 5  d) 10 | 1 |
| 16 | In Python, what does the "break" statement do?  a) It ends the program.  b) It skips the current iteration of a loop.  c) It creates a loop.  d) It performs a mathematical calculation. | 1 |
| 17 | Which of the following is a logical operator in Python?  a) +  b) /  c) or  d) = | 1 |
| 18 | What is the purpose of indentation in Python code?  a) It is used to comment out code.  b) It indicates the start and end of a program.  c) It is used to improve code readability and defines  block structure.  d) It has no specific purpose in Python. | 1 |
| **SECTION B** | | |
| 19 | x=True  y=False  z=False  if x or y and z:  print("YES")  elif x and y or z:  print("yes")  else:  print("no") | 2 |
| 20 | What is the output for the following code  l=[3,4,5,2,7,1,89,43]  for i in range(0,len(l)):  if l[i]%3==0:  l[i]=l[i]\*\*2  print(l) | 2 |
| 21 | What is the difference between break and continue statements? | 2 |
| 22 | x = True  y = False  result = not x or y and x  print(result) | 2 |
| 23 | Rewrite the following code in python after removing all the syntax errors. Underline each correction done in the code.  a,b = 2 5  While a%b = 0  a+=10  b+=2  print ‘End’ | 2 |
| 24 | Predict output of the following code:  A=[12,45,78,45,234]  B=len(A)  for i in range(0,B,2):  print(i) | 2 |
| 25 | What are immutable and mutable types? write immutable and mutable data types of python. | 2 |
| **SECTION C** | | |
| 26 | Explain: Logical AND, OR, NOT operators. | 3 |
| 27 | Write a program to get factorial of a given positive number | 3 |
| 28 | Convert the following:  (i) (1011010)2 to Hexadecimal  (ii) (723)8 to Decimal  (iii) (110110111)2 to octal | 3 |
| 29 | Write a program to print following pattern.  **\***  **\*\***  **\*\*\***  **\*\*\*\***  **\*\*\*\*\*** | 3 |
| 30 | Identify the data types of the values given below:  3, 3j, 13.0, '15', "13", 2+0j | 3 |
| **SECTION D** | | |
| 31 | 1. Write a program to take two numbers and print if the first number is fully divisible by second number or not. 2. Write a program to generate 6 random numbers between 10000 to 999999 | 2+  2  =4 |
| 32 | 1. Write a python program to convert Celsius to Fahrenheit. 2. Write a program to find the sum of all even numbers from 10 to 40 | 2+  2  =4 |
| **SECTION E** | | |
| 33 | What is Operator in Python? List out the types of operators in python. Explain any 5 types of operators.  **(or)**  Explain:   * 1. Identifier   2. Constant   3. Variable   4. Token   5. Expression | 5 |
| 34 | 1. Write a program to check a given number is prime or Not? 2. Write a Program to print table of a number, say 5. (5th Table)   **OR**  Convert the following hexadecimal numbers to binary:  (a) BE (b) BC9 (c) 9BC8 (d) FACE (E) CAB | 3+  2  =  5 |
| 35 | 1. A store charges ₹120 per item if you buy less than 10 items, If you buy between 10 and 99 items, the cost is ₹100 per item. If you buy 100 or more items, the cost is ₹70 per item. Write a program that asks the user how many items they are buying and prints the total cost.   (ii) Write a short program to generate the nos. from 1 to 10  **OR**   1. Write a program to accept the age of n employees and count the no of persons in the following age group:   a) 26-35 b) 36-45 c) 46-55   1. Write a program to find the area of circle. (Hints: area=πr2) | 3+  2  =  5 |
| \*\*\*\*\* best Of Luck \*\*\*\*\* | | |