|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | | | |
| **HY/CSQP/1123/A 30-OCT-2023** | | | | |
| **HALF YEARLY EXAMINATION - (2023-24)** | | | | |
| **SUBJECT: COMPUTER SCIENCE (PYTHON)**  **GRADE: XI** | | | MAX. MARKS: 70TIME: 3 Hrs | |
| *General Instructions:*  * *This question paper contains FIVE sections – A , B, C, D and E.* * *Section A has 18 MCQ questions of 1 mark each.* * *Section B has 7 questions of 2 marks each.* * *Section C has 5 questions of 3 marks each.* * *Section D has 3 questions of 5 marks each.* * *Section E had 2questions of 4 marks each.* * *All programming questions are to be answered using Python Language only.* * *Question paper contains 5 printed pages.* | | | | |
| **SECTION A** | | | | |
| 1. | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_are reserved words in python.** | | | 1 |
|  | 1. Literals | 1. Operators | |  |
|  | 1. Punctuators | 1. Keywords | |  |
| 2. | Write the output of the following code: > > >L= (1,2,3,4,5,(6,7,8))  > > >print(L[5]) | | | 1 |
|  | 1. (6,7,8) | 1. 6, 7, 8 | |  |
|  | 1. Error | 1. 6 | |  |
| 3. | Write the statement to add a single item 25 to an existing tuple, t1 | | | 1 |
|  | 1. t1=(25) | 1. t1=25, | |  |
|  | 1. t1=t1 + (25,) | 1. t1=t1 + (25) | |  |
| 4. | Select the correct output of the code: a = “Year 2023 at All the best”  a = a.split (‘2’) b = a[0] + “. ” +a[l] + “. ” +a[2] print (b) | | | 1 |
|  | 1. Year. 0. 3 at All the best | 1. Year 0. 3 at All the best | |  |
|  | 1. Year . 023. at All the best | 1. Year . at all the best | |  |
| 5. | Which of the following is not a valid identifier? | | | 1 |
|  | 1. Mybook | 1. @book | |  |
|  | 1. \_book | 1. Book1 | |  |
| 6. | **\_\_\_\_\_\_\_\_ creates an empty list if no argument is passed.** | | | 1 |
|  | 1. len() | 1. list() | |  |
|  | 1. append() | 1. extend() | |  |
| 7. | What will be the output of the following code?  >>> 7 + 4 \* 8 // 2 \*\* 2 - 6 / 1 | | | 1 |
|  | 1. 9.0 | 1. 9 | |  |
|  | 1. 17 | 1. 17.0 | |  |
| 8. | Which smaller unit of the CPU directs and coordinates all activities within it and determines the sequence in which instructions are executed, sending instructions sequence to other smaller unit. | | | 1 |
|  | 1. ALU | 1. CU | |  |
|  | 1. processor | 1. memory | |  |
| 9. | **What will be the output of the following python code.** **new\_list1 = [“Welcome”]** **new\_list2 = [“to”, “my”]** **new\_list3 = [“School”]** **print(new\_list1 + new\_list2 + new\_list3)** | | | 1 |
|  | 1. [‘Welcome’, ‘to’, ‘my’, ‘School’] | 1. [‘Welcome’, [‘to’, ‘my’], ‘School’] | |  |
|  | 1. error | 1. [‘Welcome, to, my, School’] | |  |
| 10. | What will be the output of the following Python code snippet?  print('cd'.partition('cd')) | | | 1 |
|  | 1. (‘cd’) | 1. (”) | |  |
|  | 1. (‘cd’, ”, ”) | 1. ( ”, ‘cd’, ”) | |  |
| 11. | **Predict the output of the given statements:** | | | 1 |
|  | 1. [1,2,3,4,5] | 1. [1,2,3,[4,5]] | |  |
|  | 1. [4,5,1,2,3] | 1. error | |  |
| 12. | Python interprets any non-zero value as false. (True/false) | | | 1 |
| 13. | Which of the will return the first three characters of the string S? | | | 1 |
|  | 1. S[3:] | 1. S[:3] | |  |
|  | 1. S[-3:] | 1. S[:-3] | |  |
| 14. | UTF32 is a type of \_\_\_\_\_\_\_\_\_\_\_\_ encoding. | | | 1 |
|  | 1. **ASCII** | 1. **extended ASCII** | |  |
|  | 1. **Unicode** | 1. **ISCII** | |  |
| 15. | A disk defragmentor is an example of ............... . | | | 1 |
|  | 1. **Application Software** | 1. **System Software** | |  |
|  | 1. **Utility Software** | 1. **Customised Software** | |  |
| 16. | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a special type of a computer software that can translate the source code into machine code.** | | | 1 |
|  | 1. **Business Software** | 1. **Software Library** | |  |
|  | 1. **Antivirus Software** | 1. **Language Processor** | |  |
|  | Q17 and 18 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 | | |  |
| 17. | Assertion(A): A part of main memory is non-volatile too.  Reasoning(R): ROM is a read only memory with some pre-written instructions, which are retained even after power is off. | | | 1 |
| 18. | Assertion(A): A computer can deliver performance only through an efficient combination of hardware and software.  Reasoning(R):  While hardware refers to the physical electronics equipment, software are the recorded programs that govern the hardware to perform tasks in a computer.\ | | | 1 |
| **SECTION B** | | | | |
| 19. | Identify the syntax errors in the given code. Rewrite the code correctly and underline the corrections made.  string=input["Enter a string: "]  length=len(string)  print("Original String:", string)  string2=""  for a in (0, length):  if a%2 = 0:  string2 += string(a)  else:  string2 += string[a].upper( )  print(string2) | | | 2 |
| 20. | Predict the output:  L=[13,12,21,16,35,7,4]  s=5  s1=3  for i in L:  if (i % 4 = = 0):  s=s+i  continue  if (i%7= = 0):  s1=s + i  print(s, end=” “)  print(s1) | | | 2 |
| 21. | a) Anuj wrote following code. How many times is the word “Welcome” printed in the following code? t = “i love python” for ch in t[2:7]:  print (“Welcome”)  b) Write the output of the following code : | | | 2 |
| 22. | Convert the while loop into for loop. num = 7 while (num < 21): print (num \* 2) num += 3 | | | 2 |
| 23. | Write a python program to remove duplicates from a list.  Example: If the entered list is [10,20,30,20,10,50,60,20,50,40],  The output should be  [10,20,30,50,60,40] | | | 2 |
| 24. | **Write a program to input a tuple of ‘n’ integers and find the minimum, maximum and sum.** | | | 2 |
| 25. | What is the need for secondary memory? | | | 2 |
| **SECTION C** | | | | |
| 26. | Write a program that reads email id of a person in the form of a string and ensures that it belongs to domain @gmail.com. | | | 3 |
| 27. | Write a program to print the pattern given below:  E  DD  CCC  BBBB  AAAAA | | | 3 |
| 28. | Explain System Software and Application software. Give 2 examples of each. | | | 3 |
| 29. | Write a program to accept a list of integers and count the number of digits each number has and print the count of each number . If number of digits are even replacing the number in the list with double of the original number.  **EXAMPLE:**  If the entered list is:  [23,890,60356,2000,6]  **OUTPUT**:  23 has 2 digits  890 has 3 digits  60356 has 5 digits  2000 has 4 digits  The list after change [46,890,60356,4000,6] | | | 3 |
| 30. | A list div contains the following elements:  [9, 35,4,19, 55,12,55,36] Write a program to swap the content with next value divisible by 5 so that the resultant list will look like [9,4, 35,19,12, 55, 36, 55] | | | 3 |
| **SECTION D** | | | | |
| 31. | Write a python program to store roll no, name and percentage of 5 students in a tuple. Store these tuples such stored as elements of a list. And perform the following:  Display the Student details one below the other.  Display the name of the student whose roll no is entered by the user. | | | 5 |
| 32. | a) Draw logical circuits for the following:  Y = (X+Y).(X’+Z’).(Y+Z)  b) Prepare truth table for the given expression:  X’(Y’+Z’)+X’Y’ | | | 5 |
| 33. | WAP to display a menu as shown below and perform the various operations based on users response.  MAIN MENU  ----------------------  1. Display Perfect No or not  2. Display Composite No or not  3. Exit  (Hint:A perfect number is **positive integer** which is equal to the sum of its positive divisors, excluding the number itself. composite numbers are numbers that have more than two factors.) | | | 5 |
|  | **SECTION E** | | |  |
| 34. | **The record of a student (Name, Roll No., Marks in five subjects and percentage of marks) is stored in the following list:** **stRecord = [‘Raman’,’A-36′,[56,98,99,72,69],78.8]**  **Write Python statements to retrieve the following information from the list stRecord**   1. **Percentage of the student** 2. **Marks in the fifth subject** 3. **Maximum marks of the student** 4. C**hange the name of the student from ‘Raman’ to ‘Raghav’** | | | 4 |
| 35 | 1. Convert the Decimal number 781 to its Binary equivalent. 2. Convert Binary number 101101.001 to its decimal equivalent 3. Convert Octal number 321 into its Binary equivalent 4. Convert hexadecimal number AE into its binary equivalent. | | | 4 |

\*\*\*