

KENDRIYA VIDYALAYA SANGATHAN
SESSION ENDING EXAMINATION (2023 – 24)
COMPUTER SCIENCE (083)
CLASS: XI

M.M.: 70

TIME: 3 HRS

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
Each question carries 1 mark

1. Give one example for the following: 1
 - a) Utility Software
 - b) Language Processor
2. Name the Python modules which need to be imported to invoke the following functions: 1
 - a) randrange()
 - b) mean()
3. Which of the following is NOT done by cyber criminals? 1
 - a) Unauthorized account access
 - b) Mass attack using Trojans as botnets.
 - c) Email spoofing and spamming
 - d) Report vulnerability in any system.
4. Predict output of the following statement: 1
`print('Amrit Mahotsav @ 75'.partition(' '))`
5. Let X be a number system having B symbols only. What will be the base value of this number system. 1
6. What will be the output for following Code? 1
`a=[1,2,(3,4)]`
`a[2][1]=5`
`print(a)`
 - a) [1,2,(3,4)]
 - b) [1,2,(3,5)]
 - (c) [1,2,5]
 - (d) None of the above
7. Which of the following is/are NOT legal python string? 1
 - a) 'abc' + 'abc'
 - b) 'abc'*3
 - c) 'abc'+3
 - d) 'abc'*'abc'
8. Answer in True or False: 1
 - a) Like '+', all other arithmetic operators are also supported by strings.
 - b) A=[] and A=list() will produce the same result.
9. What will be the output for following Code? 1
`p=7*8/5//2**1**3`
`print(p)`

10. What can be done to reduce risk of identity theft? Write any two ways. 1
 11. Use functions/objects from math module to write python expression for the mathematical expression: $|e^2 - x|$ 1
 12. When do we need to use break statement in python programs? 1
 13. Write two advantages of Python Programming Language. 1
 14. Arrange the following in ascending order of memory capacity:
TB, Byte, KB, Nibble, PB, MB, GB 1
 15. Suggest any two practices to ensure Communication Etiquettes over internet. 1
 16. Things like online email account, social media account or handle, online shopping account, online photo sharing account, trademarks, own registered domain name etc. are collectively called _____.
(a) Online Identity
(b) Online estate
(c) Digital identity
(d) Digital property 1
- 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
 - (e) Both A and R are False
17. Assertion (A): Strings in Python are mutable. 1
Reason (R): The first character has the index 0 and the last character has the index n-1 where n is the length of the string.
 18. Assertion(A): clear() method removes all elements from the dictionary. 1
Reason(R): len() function cannot be used to find the length of a dictionary.

Section – B

Each question carries 2 marks

19. Fill in the blanks: 2
 - a) 10 KB is equivalent to _____ bytes.
 - b) Complete the DeMorgan's Law, $A' + B' =$ _____.
 - c) $(125)_{10} = (\quad)_{16} = (\quad)_8$
20. Predict the output of the Python code given below: 2
 $T = (1, 2, 3, 4, 5, 6, 7, 8)$
 - a) print (T [0])
 - b) print (T [3:4])
 - c) print (T [4:1])
 - d) print (T [2:6:2])
21. Consider a given list of numbers, write a program create another list which store half of each even number and double of each odd number in the given list. Also, display the newly created list. 2
 For example, if given list L is [3,5,6,2,7,4,5,8] then new list should contain [6,10,3,1,14,2,10,4]
22. Explain mutable and immutable data types using Python statements? Also, Give one example data type of mutable and immutable data types. 2

- c) `print(t1 + t2)`
- d) `print(sum(t2))`
- e) `print(sorted(t1))`
`print(t1)`
- f) `print(max(t2))`

Section – D

Each question carries 4 marks

31. a) Rajat received an e-mail sent from a representative of Income Tax Department. The mail required him to update his details using a given link. On clicking the link, he was taken to a site designed to imitate an official looking govt. site, such as rbi.gov. He uploaded some important information on it. 4
Identify and briefly explain the cybercrime being discussed in the above scenario. (1,
b) What type of damages can be caused by viruses to your computer. 1,
c) As a citizen of India, what advise you should give to others for e-waste disposal? 2)
32. a) Sunil got an assignment to write a python program which receives an integer and prints the number after doubling it. He is not getting desired results, help Sunil to find and correct the errors in his code given below: 4
`Number=input("Enter Number")`
`DoubleTheNumber = Number*2`
`Print(DoubleTheNumber)` (1,
b) Write a python program to print the following pattern: 3)
- ```

-- -- 5
-- 4 5
-- 3 4 5
-- 2 3 4 5
-- 1 2 3 4 5

```

### Section – E

Each question carries 5 marks

33. The record of a participant of Dance competition: Participant ID, Name, Score of 5 rounds (out of 15) is stored in the following dictionary: 5  
`Data={'id':'JDJ15', 'name':'Raj Dhingra', 'score':[6,9,6,8,9]}`  
Write Python statements to retrieve the following information from the list Data.  
a) display Overall Percentage score of the 5 performances.  
b) Add the overall percentage score calculated above to dictionary Data.  
c) Display Maximum score of the participant.  
d) Update the Participant id from 'JDJ15' to 'JDJ145'  
e) Display the name of the Participant in upper case letters.
34. Write python statements using the most appropriate list method/function to perform the following tasks: 5  
Given a list L having some elements.  
(a) Add a new element 100 as 4th element in the given list L  
(b) Add a new element 100 at the last position of the list L  
(c) Delete 2nd element from the given list L  
(d) Delete the element 100 from the given list  
(e) Add elements of another given list L2 in given list L

35. a) Differentiate between System Software and Application Software. **5 (1,**  
b) Draw the logic circuit diagram for the boolean expression:  $X = AB' + A'B + AB$ . Also, **2,**  
make a truth table to find the value of X.  
c) Give brief description of ASCII encoding scheme. Also, expand ISCII. **2)**

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