$\square$ Code No. : 13165 N (F)
VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD
Accredited by NAAC with A++ Grade

# B.E. III-Semester Main Examinations, Jan./Feb.-2024 <br> Computing Using Python (OE-I) 

Time: $\mathbf{3}$ hours
Max. Marks: 60
Note: Answer all questions from Part-A and any FIVE from Part-B
Part-A $(10 \times 2=20$ Marks $)$

| Q. No. | Stem of the question | M | L | CO | PO |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | Write syntax of if-else statement in python with suitable example. | 2 | 2 | 1 | 1 |
| 2. | List any two features of python language. | 2 | 1 | 1 | 1 |
| 3. | What is the difference between find () and index () method in lists. | 2 | 2 | 2 | 1 |
| 4. | How to create a single element in tuple? | 2 | 1 | 2 | 1 |
| 5. | What is the difference between lists and sets in python? | 2 | 1 | 3 | 1 |
| 6. | List any two methods in dictionary with suitable example | 2 | 2 | 3 | 1 |
| 7. | How to create a private variable in class in python. | 2 | 1 | 4 | 1 |
| 8. | Write down the syntax of open() function in files in python | 2 | 2 | 4 | 1 |
| 9. | Write a python code to swap two numbers without using third variable. | 2 | 2 | 1 | 1 |
| 10. | How range () function works, explain with suitable example? | 2 | 2 | 2 | 1 |
|  | Part-B (5 $\times 8=40 \mathrm{Marks}$ ) |  |  |  |  |
| 11. a) | What is the significance of break, continue and pass statement in python. | 4 | 1 | 1 | 1 |
| b) | Write a program in python to find factorial of number ' N ' using recursive function. | 4 | 3 | 1 | 2 |
| 12. a) | Using slicing perform following operations on string | 4 | 3 | 2. | 2 |
|  | i) Reverse of string <br> ii) Swap First and Last character in a string <br> iii) Display every alternative charter in a string. <br> iv) Display every $3^{\text {rd }}$ character in a string |  |  |  |  |
| b) | Write a python program to create a list of N elements and calculate sum of odd numbers and sum of all even numbers in it. | 4 | 3 | 2 | 2 |

Contd... 2
13. a) What is the output of following code:
$\mathrm{S} 1=\{1,2,3,4,5,6,7\}$
$S 2=\{4,5,6,7,8,9,10\}$
print(s1|s2)
print(s1\&s2)
print(s1-s2)
print(s1.symmetric_difference(s2)
s1.add(15)
s2.remove(4)
print(s1|s2)
print(s1\&s2)
print(s1-s2)
print(s1.symmetric_difference(s2)
b) Generate the following output in dictionary using comprehensive Output $=\{$ 'A': 65, 'B': 66, 'C':67, $\qquad$ 'Z': 90 \}
14. a) Explain various methods present in files with example.
b) Write a code, class that has a list of integers as data members and read (), display (), find-largest (), find-smallest (), sum (), and find-mean () as its member functions.
15. a) Explain while and for loop with suitable example.
b) Explain methods and functions present in string in python programming.
16. a) Write a program to create a set of prime number from a list consisting of elements from 1 to N .
b) Explain the various functions present in PICKLE and JSON.

Answer any two of the following:
17. a) Explain comparison operator and logical operator with python code.
b) Write python code to find maximum element in a list.
c) Explain different types of inheritance present in python programming with block diagram.

M : Marks; L: Bloom's Taxonomy Level; CO; Course Outcome; PO: Programme Outcome

| i) | Blooms Taxonomy Level - 1 | $20 \%$ |
| :---: | :--- | :---: |
| ii) | Blooms Taxonomy Level - 2 | $40 \%$ |
| iii) | Blooms Taxonomy Level - 3 \& 4 | $40 \%$ |

