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Following Paper ID and Roll No. to be filled in your Answer Book.

PAPER ID : 43202 Roll No. [redacted]

B. Tech. Examination 2023-24

(Even Semester)

PROGRAMMING CONCEPTS WITH PYTHON

Time : Three Hours] *[Maximum Marks : 60*

Note :– Attempt all questions.

SECTION–A

1. Attempt all parts of the following : 8×1=8

(a) Write the code to create a dictionary of three fruits.

(b) What do you mean by len ( ) function?

(c) What is doc string?

(d) What are tuples in Python?

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(e) What type of error is returned by the following code :

S = "python practice"

S [5] = d

(f) A tuple is declared as list = (1, 2, 3, 4, 5). What will be the value of print (list [: : -1])?

(g) What is module and package in Python?

(h) Name any two files access modes in Python.

SECTION – B

2. Attempt any two parts of the following : 2×6=12

(a) What is meant by selection, iteration and sequence control structures?

(b) Write the algorithm, pseudocode and draw the flowchart for the folowing :

(i) Find minimum in a list.

(ii) Guess an integer number in a range.

(c) What is a function? Mention the type of function and use.

(d) Write a Python program to check if a 3 digit number is Armstrong number or not?

SECTION – C

Note :– Attempt all questions. Attempt any two parts from each questions. 8×5=40

3. (a) Describe the syntax for the following function and explain with an example :

(i) abs ( )

(ii) max ( )

(iii) divmod ( )

(iv) pow ( )

(v) len ( )

(b) Write Python program to implement stack operation.

(c) Write Python program to count the number of times on item appear in the list.

4. (a) Explain identifier, keywords, statements, expressions and variables in Python programmings language with examples.

(b) Explain the use of join ( ) and split ( ) string methods with examples. Describe why strings are immutable with an example?

(c) Describe the characteristics of the CSV format.

5. (a) Explain the concept of scope and life time of variables in Python programming language with an example.

(b) Write Python program to check for the presence of a key in the dictionary and find the sum of all its values.

(c) Discuss the following dictionary methods with an example :

(i) get ( )

(ii) pop ( )

(iii) values ( )

(iv) items ( )

6. (a) Write Python program to change the file extension from .txt to .csv of all the files (including from sub directories) for a given path.

(b) Discuss formate specifiers and escape sequence with examples.

(c) Discuss the following mehods of OS.path module :

(i) isfile ( )

(ii) abspath ( )

(iii) dimame ( )

(vi) relpath ( )

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6(a) Explain SOE

Eratosinthesis.

with program

6(c) Explain ADT in python mil