B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV/DEC 2025

Second Semester

Computer Science and Engineering

20ESIT202 - PYTHON PROGRAMMING

Regulations - 2020

Duration: 3 Hours

Max. Marks: 100

PART - A (MCQ) (10 × 1 = 10 Marks)

Answer ALL Questions

		Marks	K–Level	CO
1.	Is Python case sensitive when dealing with identifiers? (a) yes (b) machine dependent (c) no (d) none of the mentioned	1	K1	CO1
2.	What will be the value of the following Python expression? 4 + 3 % 5 7 (b) 2 (c) 4 (d) 1	1	K1	CO1
3.	What is the output when we execute list("hello")? (a) ['h', 'e', 'l', 'l', 'o'] (b) ['hello'] (c) ['llo'] (d) ['olleh']	1	K1	CO2
4.	As what datatype are the *args stored, when passed into a function? (a) List (b) Tuple (c) Dictionary (d) None of the above	1	K1	CO2
5.	What will be the output of this round (4.576) function? (a) 4 (b) 5 (c) 576 (d) 4576	1	K2	CO3
6.	What is the purpose of math module in python? (a) To handle file I/O operations (b) To perform mathematical operations (c) To interact with the operating system (d) To manipulate strings	1	K1	CO3
7.	After opening a file in 'w+' mode, what happens if you immediately start reading the file before writing any data? (a) The file will contain the data previously stored before it was opened (b) An error occurs because the file is empty (c) The reading operation will return an empty string indicating the file is currently empty (d) The read operation resets the file pointer to the beginning of the file automatically	1	K2	CO4
8.	To read the entire remaining contents of the file as a string from a file object infile, we use _____ (a) infile.read(2) (b) infile.read() (c) infile.readline() (d) infile.readlines()	1	K1	CO4
9.	Which module in the python standard library parses options received from the command line? (a) getarg (b) getopt (c) main (d) os	1	K1	CO5
10.	Which function removes a set's first and the last element from a list? (a) pop (b) remove (c) dispose (d) discard	1	K1	CO6

PART - B (12 × 2 = 24 Marks)

Answer ALL Questions

		Marks	K–Level	CO
11.	Illustrate an operator that have the same level of precedence with an example.	2	K2	CO1
12.	Compare between string and string slices.	2	K2	CO1
13.	Illustrate the swapping of two values using tuple assignment.	2	K2	CO2
14.	Interpret how to access an element in the dictionary.	2	K2	CO2
15.	Interpret with a program using user defined function that accepts an integer and increments the value by 5.	2	K2	CO3
16.	Discuss about Python module with an example.	2	K2	CO3
17.	Summarize the different file operations in python.	2	K2	CO4
18.	Can we have multiple except blocks while handling exceptions.Justify the statement.	2	K2	CO4

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

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19. Illustrate the function name to create legends using Matplotlib in python.	2	K2 CO5
20. What is Numpy?	2	K1 CO5
21. Illustrate with a Numpy program to create an array of 10 Zeros and 10 ones.	2	K2 CO6
22. Define scipy.	2	K1 CO6

PART - C (6 × 11 = 66 Marks)
Answer ALL Questions

23. a) Consider that you have written an exam for a total score of 100 for five subjects and Write a code for the below conditions
• If your average score is less than 35 then you will be considered as FAIL in the exam.
• If your average score is above or equal to 35 and less than 60 then you will be considered as Passed in Second class.
• If your average score is above or equal to 60 and less than 80 then you will be considered as Passed in First class.   11   K3   CO1

OR

b) Clarify in detail about while loop, break and continue statement in Python with an example.   11   K2   CO1

24. a) Illustrate about string methods in Python. And explain any five string methods with program in detail.   11   K2   CO2

OR

b) Distinguish between lists, tuples and dictionaries. Give an example for their usage.   11   K2   CO2

25. a) Develop a python function to create a simple calculator that can add, subtract, multiply or divide depending upon the input from the user.   11   K3   CO3

OR

b) Develop a python program to display car model namely, BMW, Audi and Nissan using package named Cars and build three modules for the same.   11   K3   CO3

26. a) Demonstrate with a program that reads the contents of the file text.txt and counts the number of alphabets, blank spaces, lowercase letters and uppercase letters, the number of words starting with a vowel, and the number of occurrences of the word 'is' in the file.   11   K3   CO4

OR

b) Illustrate the method of Handling an Exception with an example.   11   K2   CO4

27. a) Write a NumPy program to calculate the difference between the maximum and the minimum values of a given array along the second axis. Demonstrate a NumPy program to calculate the difference between the maximum and the minimum values of a given array along the second axis.   11   K3   CO5

OR

b) Demonstrate a Pandas program to add, subtract, multiple and divide two Pandas Series.   11   K3   CO5

28. a) Clarify about line plot having multiple lines using Matplotlib with examples.   11   K2   CO6

OR

b) Illustrate a python program for Creating a phone book directory using tkinter GUI programming.   11   K3   CO6

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

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