

CBCS SCHEME



18EC646

Sixth Semester B.E. Degree Examination, June/July 2025 Python Application Programming

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Explain building blocks of the python program. (06 Marks)
- b. Identify and explain different general types of errors encountered in the python program. Write a python program which prompts the user for a Celsius temperature, convert the temperature to Fahrenheit and print the converted temperature. (06 Marks)
- c. Illustrate catching exception using try and except with syntax. Write a program to prompt for a score between 0.0 and 1.0. If the score is out of range, print an error. If the score is between 0.0 and 1.0 print a grade using the following table:

Score	Grade
≥ 0.9	A
≥ 0.8	B
≥ 0.7	C
≥ 0.6	D
< 0.6	F

(08 Marks)

OR

- 2 a. Explain the following :
(i) Skills necessary for programmer
(ii) Interpreter and compiler
(iii) Short circuit evaluation of the expression
(iv) Modulus operator (08 Marks)
- b. Compare fruitful and void function with example. (04 Marks)
- c. Write a python program to reverse a number and find the sum of digits of the reversed number using function. Prompt the user for inputs. (08 Marks)

Module-2

- 3 a. Illustrate the important parameters involved in the loop construction and explain the working of the infinite and definite loop with example. (06 Marks)
- b. Mention the advantages of the continue statement. Write a python program to compute only even numbers sum within the natural numbers using continue statement. (06 Marks)
- c. Write a program to count the total number of vowels, consonants and blanks in the given string. String = "May God Bless You". (08 Marks)

OR

- 4 a. Explain string slice and strings are immutable with syntax. (04 Marks)
- b. Identify and explain different file methods associated with file object along with syntax. (10 Marks)
- c. Write python program to find the longest word in a file. Get the file name from the user (06 Marks)

Module-3

- 5 a. Explain list operations with example. Write a python program to add two 3×3 matrices using list. (08 Marks)
- b. Differentiate the following with syntax:
 (i) pop() and remove()
 (ii) sort() and reverse()
 (iii) append() and insert() (06 Marks)
- c. Write a python program to count the number of characters in the string using dictionaries. Display the keys and their values in alphabetic order. (06 Marks)

OR

- 6 a. Illustrate the relation between tuples and lists with example. (06 Marks)
- b. Write python program using tuples to swap two numbers without using intermediate variables. Prompt the user for input. (04 Marks)
- c. Write a python program to check the validity of a password. The password should contain at least (i) one lower case letter (ii) one digit (iii) one upper case letter (iv) one special character [\$, @, #, !] (v) Six characters long. The program should accept a password and check the validity of the password using the above criteria and print "Valid" and "Invalid" as the case may be. (10 Marks)

Module-4

- 7 a. Explain the creation of classes and objects in python language with syntax. (05 Marks)
- b. Explain copying an object in python with example. (05 Marks)
- c. Write a python program using class and object concept to deposit, enquire and withdraw money in a Bank Account. (10 Marks)

OR

- 8 a. Explain pure and modifier method with example. (05 Marks)
- b. Explain `_init_()` method and `_str_()` method with example. (05 Marks)
- c. Write python program to create TIME class to present the time in HH:MM:SS format. Perform the following operations:
 (i) Create T₁, T₂, T₃ TIME objects
 (ii) Initialize T₁, T₂, T₃ using `_init_()`
 (iii) Print T₁, T₂, T₃ in HH:MM:SS format
 (iv) T₃ = T₁.addTime(T₂)
 (v) T₃.increment(50)
 Test your code. (10 Marks)

Module-5

- 9 a. Illustrate the following with the help of python construct:
- (i) How to retrieve an image over HTTP?
 - (ii) How to retrieve web pages with URLLib?
- (10 Marks)
- b. Write a python program that retrieves a user's twitter friend, parse the returned JSON and extract some information about the friend.
- (10 Marks)

OR

- 10 a. List the difference between XML and JSON? Write a simple python program to parse JSON.
- (10 Marks)
- b. Write a python program to create a table EmpDB with two departments (Quality control and Testing). The fields of employee table are (EmpID, DeptName, GrossSalary). Establish a database connection to EmpDB. Perform the following operations:
- (i) Display employee details
 - (ii) Display Gross salary of employees working in the Quality control department
 - (iii) Display the total gross salary paid to the employee working in the quality control department.
- (10 Marks)
