



**WEST BENGAL STATE UNIVERSITY**  
B.Sc. Honours/Programme 1st Semester Examination, 2021-22

**CMShGEC01T/CMShGCOR01T-COMPUTER SCIENCE (GE1/DSC1)**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.  
Candidates should answer in their own words and adhere to the word limit as practicable.  
All symbols are of usual significance.*

**GROUP-A**

1. Answer any **four** questions from the following: 2×4 = 8
- (a) What is List in Python?
  - (b) What is negative index in Python?
  - (c) What is tuple?
  - (d) What is the difference between top-down and bottom-up programming?
  - (e) “Python is a high level programming language” — Justify it.
  - (f) What is the difference between DRAM and SRAM?
  - (g) What do you mean by Dynamic Linking?

**GROUP-B**

**Answer any four questions from the following** 8×4=32

2. (a) What is flowchart? 2
- (b) Differentiate between High Level, Low Level and Assembly Language. 2
- (c) What do you mean by interpreter? 2
- (d) What is system bus? 2
3. (a) What is decision table? 2
- (b) What is the purpose of a decision table? 2
- (c) Create a decision table for a login screen: 4
- (i) The condition states that if the user provides the correct username and password the user will be redirected to the homepage.
  - (ii) If any of the input is wrong, an error message will be displayed.

4. (a) Explain While loop in Python with example. 3  
 (b) Explain Dictionary in Python with example. 3  
 (d) What is the purpose of pass statement in Python? 2
5. (a) Write a menu-driven program, using user-defined functions to find the area of rectangle, square and circle by accepting suitable input parameters from user. 4  
 (b) Write an algorithm to find the factorial of any number  $n$ . 4
6. (a) Write a program to check whether a number is prime or not. 4  
 (b) Write a program to print the sum of the following series: 4
- $$1 + \frac{1}{2} + \frac{1}{3} + \dots + \frac{1}{n}$$
7. (a) What do you mean by built-in-functions in Python? Give examples. 3  
 (b) Discuss the following list functions: 5
- (i) len()
  - (ii) sum()
  - (iii) any()
  - (iv) all()
  - (v) sorted().
8. Write short notes on any **two**: 4×2 = 8
- (a) Cache memory
  - (b) Memory mapped I/O and I/O mapped I/O
  - (c) Types and generations of Computers
  - (d) Memory Hierarchy.

**N.B. :** Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.

—X—