



WEST BENGAL STATE UNIVERSITY
B.Sc. Honours 1st Semester Examination, 2019



CMSACOR01T- COMPUTER SCIENCE (CC1)

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) How does a switch statement differ from an if statement?
 - (b) What is the utility of scope resolution operator?
 - (c) "Operator overloading is a form of polymorphism"—Justify.
 - (d) What is necessity of do-while() loop? Give example.
 - (e) What is data abstraction in object-oriented programming approach?
 - (f) What is the difference between a structure and a class?
 - (g) What is called method overriding?

GROUP-B

Answer any four questions from this group 8×4 = 32

2. (a) What happens when a function throws an exception that was not specified by an exception specification for this function? 2
- (b) What does 'throw' mean? Where should you use it? Explain with an example. 2+2
- (c) Differentiate between a dangling pointer and an auto pointer. 2
3. (a) What is the role of a constructor? Explain the purpose of overloading constructor. 2+3
- (b) A friend function cannot be used to overload the assignment operator '='. Explain why. 3
4. (a) When do you make a class virtual? 2
- (b) Distinguish between multiple and multilevel inheritance. 3
- (c) What is improper inheritance? 3

5. (a) Define dynamic memory allocation strategy in C and C++. 3
(b) How does free know the size of memory to be deleted? How do you allocate multidimensional arrays using new? Explain with a suitable example. 2+3
6. (a) What do you mean by polymorphism in OOP? What kinds of polymorphisms are there in C++? Give examples. 2+4
(b) Differentiate between pointer variable and reference variable with example. 2
7. (a) How can you use an integer pointer to point a double? 2
(b) What are the purposes of copy constructor? 2
(c) What are the two possible ways of operator overloading? Give examples. 4
8. Write short notes on any *two* of the following: 4+4
(a) Template vs. Macro
(b) Namespace
(c) Declaration vs. Definition in C
(d) fstream class.

—x—