

2019

B.Sc.

1st Semester Examination

COMPUTER SCIENCE (Honours)

Paper - C 1-T

Full Marks : 40

Time : 2 Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

Group - A

1 .Answer any *five* questions of the following :

5×2=10

- (i) What is a macro ?
- (ii) What is the use of a continue and a break statement in a loop ?
- (iii) What is the use of typedef in C/C++ ?
- (iv) What is a class and object in C++ ?

[Turn Over]

- (v) Define local and global variable
- (vi) What are bitwise operators ?
- (vii) What is function prototype ?
- (viii) What is polymorphism ?

Group - B

2. Answer any *four* questions of the following :

4×5=20

- (i) (a) Write a function to calculate the factorial of a given number.
- (b) Why 'this' keyword is used in C++ ? 4+1
- (ii) (a) Briefly explain the switch case statement with example.
- (b) How command line arguments are handled in a C/C++ program ? 3+2
- (iii) (a) Write a function to check whether a given year is leap year or not.
- (b) What is the basic difference between structure and union ? 4+1

(iv) (a) Explain the different between function overloading and function overriding in C++ with example.

(b) What is a copy constructor in C++ ?

3+2

(v) What is recursive function ? Write a program to find factorial of any number using recursive function in C.

(vi) Define structure and union. What are the malloc () and calloc () function ?

2+3

Group - C

3. Answer any *one* question of the following :

1×10=10

(i) (a) What is the difference between static and dynamic memory allocation ?

(b) How dynamic memory allocation is handled in C ?

(c) Declare and initialize a two dimensional array in C.

[Turn Over]

(d) How a pointer is passed through a function and return from a function ? Discuss with a simple example. 2+3+2+3

(ii) (a) What is encapsulation and inheritance in C++ ?

(b) What are new and delete operators in C++ ?

(c) What is a virtual function and why it is used in C++ ?

(d) Briefly explain try and catch statement used for exception handling in C++. 2+2+3+3
