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B.Sc. (Second Year) Examination, 2018

COMPUTER SCIENCE

Second Paper

(C++ and Object Oriented Programming)

Time : Three Hours

Maximum Marks : 50

Note : Answer five questions in all. Question No.1 is compulsory. Answer one question from each unit. Marks allotted to each question are indicated on the right-hand side of the margin. <http://www.mgkvponline.com>

Note : The answers to short questions should not exceed 200 words and the answers to long questions should not exceed 500 words.

1. Give short answers of the following questions:
 $2 \times 5 = 10$

(a) How is OOP different from Structured Programming?

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- (b) What is the role of a header file in a C++ program? Explain with an example.
- (c) How does a nested IF statement work in C++? Explain with an example.
- (d) What is the difference between WHILE and Do-While?
- (e) What are the different operations on Pointers?

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Unit - I

2. Write short notes on the following:

$2 \frac{1}{2} \times 4 = 10$

- (a) Data Types in C++
- (b) Increment/Decrement operator
- (c) Conditional operators
- (d) Library functions

OR

3. What are the important aspects of the OOP paradigm? What are the advantages that a programmer will gain from it?

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Unit - II

4. Write a program in C++ to carry out the multiplication of two matrices of order (3×3) and to print out the product matrix (result).

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OR

5. Explain with examples:

 $2\frac{1}{2} \times 4 = 10$

- (a) FRIEND function
- (b) Inline function
- (c) Nested Classes
- (d) Break and continue

Unit - III

6. Differentiate between:

 $2\frac{1}{2} \times 4 = 10$

- (a) Operator overloading and function overloading
- (b) Call by Value and Call by Reference
- (c) Automatic variable and External Variable
- (d) Default argument and Constant argument

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OR

7. Write a C++ function which computes the GCD of two integers (A, B) and returns the computed integer value.

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Unit - IV

8. Explain the concept of inheritance through a suitable program and also mention its different forms.

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OR

9. Write a C++ program to create a file for storing the data of students- name, date-of-birth, course, marks obtained, and to enter the records of ten different students in it.

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