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B.TECH.

THEORY EXAMINATION (SEM-IV) 2016-17 OBJECT ORIENTED PROGRAMMING WITH C++

Time: 3 Hours Max. Marks: 100

Note: Be precise in your answer. In case of numerical problem assume data wherever not provided.

SECTION - A

1. Explain the following:

 $10 \times 2 = 20$

- (a) Define Generalization.
- **(b)** What do you mean by Abstract class?
- (c) What do you mean by this pointer?
- (d) Define destructor.
- (e) Explain Polymorphism.
- **(f)** Define derived attribute.
- (g) Define Inheritance.
- (h) Write two characteristics of OOPs.
- (i) Explain pure virtual function.
- (j) Define Inline function.

SECTION - B

2. Attempt any five of the following questions:

 $5 \times 10 = 50$

- (a) What is copy constructor? Explain with example.
- **(b)** What is Constructor? Write a program to find the area of the circle using constructor.
- (c) What is function overloading? Explain with a suitable example.
- (d) What is operator overloading? Explain binary operator overloading with an example.
- (e) Compare between object oriented methodology with the procedural methodology.
- (f) Write C++ program for sorting ten integer numbers.
- (g) What are command line arguments? Write a program to finding factorial for a given number using command line argument.
- **(h)** Define exception handling. How it will work in C++?

SECTION - C

Attempt any two of the following questions:

 $2 \times 15 = 30$

- 3 Explain with a suitable example in C++ of the following-
 - (i) File Operations
 - (ii) Class Template
- 4 Define Inheritance with all types and suitable example.
- 5 Short notes on the following-
 - (i) Virtual function
 - (ii) Function Template