G 1602 (Pages : 2) Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY 2016

Fourth Semester

Branch : Computer Science and Engineering

OBJECT-ORIENTED PROGRAMMING (R)

(Old Scheme—Prior to 2010 Admissions)

[Supplementary/Mercy Chance]

Time : Three Hours Maximum : 100 Marks

Write neat and efficient programs wherever needed.

Part A

Answer **all** *questions.*
Each question carries **4** *marks.*

1. What is the purpose of the keyword void in function declaration ? What is the purpose of void in function definition ?
2. What do you mean by scope of a class object ?
3. What do you mean by single inheritance ? Discuss its declaration and definition.
4. What is containership ? How it is different from the inheritance technique ?
5. What is the role of virtual functions in late binding of the program ? Explain.
6. What is an abstract class ? Give an example.
7. What happens if we don't define a destructor after a construtor ? Explain.
8. Explain the differences between class templates and function templates.
9. What are swings in Java ? What is its need ?
10. What is dynamic object allocation ? How it is implemented in Java?

(10 × 4 = 40 marks)

Part B

Answer **all** *questions.*
Each full question carries **12** *marks.*

11. Write an OOP to find the frequency of a specified character in a given text.

Or

12. Write an OOP to read the student's records (name, date of birth, entrance rank) and sort and print the roll list in the alphabetical order.

Turn over

13. (a) Explain the syntax of multiple inheritance. What are its advantage ? (6 marks)

(b) Give the differences between multiple and multilevel inheritances. Explain with examples. (6 marks)

Or

14. Write a program which calculates the sum of private data of a class using friend function.

15. Write a program to show overloading of plus (+) operator through a friend function.

Or

16. Design a class for storing a character string with overloaded operator (+) to concatenate strings and operator functions ==, < and > to compare strings.

17. Write a program to define and declare a function template to find "a to the power b", with a and b taking int, float and double values.

Or

18. Write a program which swaps two numbers by function template, call this into main program.

19. Explain in detail with suitable examples on how decision making is done with branching control structures in Java.

Or

20. Explain in detail how multiple inheritances can be achieved in Java by using interfaces. Give examples.

[5 × 12 = 60 marks]