18/05/18

Reg. No. :

Question Paper Code : 40908

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2018

Fourth Semester

Electrical and Electronics Engineering

CS 6456 – OBJECT ORIENTED PROGRAMMING

(Electronics and Instrumentation Engineering/Instrumentation and Control Engineering)

(Regulations 2013)

Time : Three Hours | Maximum : 100 Marks

Answer ALL questions

PART – A (10×2=20 Marks)

1. What is an object ? Give example.
2. Define an abstract data type.
3. What is a member function ?
4. Define polymorphism.
5. Outline the relationship between containers, iterators and algorithms.
6. Write the syntax for defining a function template.
7. What is a class ? Give an example for a class in java.
8. Name the access modifiers in java.
9. Define a package in java and write the syntax to declare a package.
10. What is multithreading ?

PART – B (5×13=65 Marks)

11. a) Appraise the characteristics of object oriented programming languages. (13)

(OR)

b) Compare the features of C++ and Java. (13)

12. a) Write a C++ program to sort an array of 'n' numbers in ascending order. Use classes and member functions. **(13)**

(OR)

b) What is an iterator ? Explain with an example iterators in C++. **(13)**

13. a) What is a template ? Outline the need for templates in C++ and appraise with an example the different types of templates. **(13)**

(OR)

b) What is inheritance ? Explain with an example the different types of inheritance in C++. **(13)**

14. a) Explain with an example the control statements in Java. **(13)**

(OR)

b) Write a Java program to accept two matrices, multiply the matrices and print the result. Use classes and methods. **(13)**

15. a) What is a java interface ? How to implement an interface ? Explain with an example. **(13)**

(OR)

b) What is exception handling ? Explain with an example exception handling in java. **(13)**

PART – C **(1×15=15 Marks)**

16. a) Write a C++ program to perform the following : **(15)**

Define a class account to represent a bank account. Include the following :

Data members :

- Account number
- Name of the depositor
- Type of account
- Balance amount in the account

Member functions :

- To assign initial values
- To deposit an amount
- To withdraw an amount after checking the balance
- To display name and balance

(OR)

b) Write a Java program to sort an array of 'n' names in alphabetic order. Use classes and methods. **(15)**