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Question Paper Code : 60389

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2016.

Fifth Semester

Electrical and Electronics Engineering

CS 2311/CS 59/10133 EE 604 — OBJECT ORIENTED PROGRAMMING

(Common to Electronics and Instrumentation Engineering and Instrumentation and Control Engineering)

(Regulations 2008/2010)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define attribute.
2. What is compile time polymorphism in OOPS?
3. Define function templates. Give an example.
4. Give an example to show the usage of `dynamic_cast` in C++.
5. What is friend class?
6. What is bytecode?
7. Why is Java language called as 'robust'?
8. How does Java make an executable file?
9. What is meant by interface?
10. What is meant by event driven programming?

PART B — (5 × 16 = 80 marks)

11. (a) (i) List out the features of object oriented programming.
(ii) Distinguish between abstraction and encapsulation.
(iii) Explain Do- while with an example. (5+3+8)

Or

- (b) (i) What are constructors? Explain the concept of destructor with an example.
(ii) Write a C++ program to list out prime numbers between the given two limits. (8+8)
12. (a) (i) Write a C++ program using operator overloading to add two time values in the format HH:MM:SS to the resulting time along with rounding off when 24 hours is reached. A time class is created and operator + is overloaded to add the two time class objects. (10)
(ii) Explain in detail about friend functions in C++ with example. (6)

Or

- (b) (i) What is multiple inheritance? Discuss the syntax and rules of multiple inheritance in C++. How can you pass parameters to the constructors of base classes in multiple inheritance? Explain with suitable example. (8)
(ii) What is the difference between a virtual function and a pure virtual function? Give example of each. (8)
13. (a) Explain the file handling techniques in cpp. (16)

Or

- (b) Write a C++ program to create a class called STRING and implement the following operations. Display the results after every operation by overloading the operator <<.
- (i) STRING s1 = "Anna"
(ii) STRING s2 = "University"
(iii) STRING s3 = s1 + s2 (Use copy constructor).

14. (a) (i) Explain the structure of Java virtual machine with relevant diagrams. (8)
- (ii) Discuss the significance of Java byte codes in detail. (8)

Or

- (b) (i) Define package. Write the steps in creating and using a package in a Java program and explain with an example. (10)
- (ii) How do you create, initialize and access an array in Java? Illustrate with suitable examples. (6)
15. (a) Explain with an example the exceptional handling feature in Java.

Or

- (b) With a simple program explain the multi threading concept in Java.
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