

TRIBHUVAN UNIVERSITY
Institute of Science and Technology
2071

Bachelor Level/ Second Year/ Third Semester/ Science
Computer Science and Information Technology (CSc. 202)
(Object Oriented Programming)

Full Marks: 60
Pass Marks: 24
Time: 3 hours

Candidates are required to give their answers in their own words as far as practicable.
The figures in the margin indicate full marks.

Section A

Attempt any two questions :(2x10=20)

1. Why do we need object oriented programming? How can we use inheritance to reuse already written and tested code in programs? Discuss with suitable example.(3+3+4)
2. Discuss features of class and object. Design a class to represent a bank account with data members name, account-number, account-type, and balance and functions to assign initial values, to deposit an amount, to withdraw an amount after checking balance, and to display the name and balance. (4+6)
3. What is operator overloading? What are the benefits of overloading? How is operator overloading different from function overloading. Write a program that shows an example of function overloading. (2+2+2+4)

Section B

Attempt any eight questions :(8x5=40)

4. Discuss polymorphism with example.
5. What is library function? How is it different from user defined function?
6. What is looping? Differentiate while loop with do-while loop with example.
7. Discuss the use of inline function with example.
8. What is constructor? Differentiate it with destructor.
9. Explain about accessing a member function outside a class with example.
10. Write a program that decreases an integer value by **1** (one) by overloading-operator.
11. Differentiate between abstract base classes and concrete classes.
12. What is function template? Differentiate it with class template.
13. Write a program to show exception handling.

