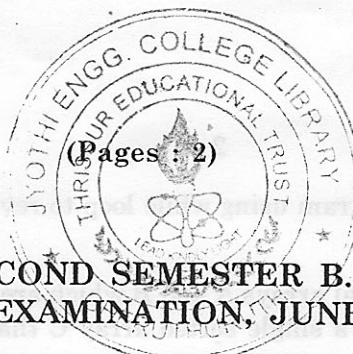


C 5812



Name.....

Reg. No.....

**COMBINED FIRST AND SECOND SEMESTER B.TECH. (ENGINEERING)
DEGREE EXAMINATION, JUNE 2010**

EN 2K 108/PTCE/PTME/PTCH 2K 105—COMPUTER PROGRAMMING IN C

(Common to all Branches)

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

Part A

1. (a) What is the measure used to evaluate the efficiency of an algorithm ?
- (b) What are syntactic and run time errors ? Give examples.
- (c) With example, explain how preincrement and postincrement perform in different ways.
- (d) Write a program to find the sum of all integers greater than 100 and less than 200 that are divisible by 7.
- (e) Explain the need for away variables with example.
- (f) List the bitwise operations in C with example for their operation.
- (g) What is Data Abstraction and encapsulation ?
- (h) What is Runtime polymorphism ?

(8 × 5 = 40 marks)

Part B

2. (a) What are the steps involved in computer programming and explain the activities involved in each step ?

Or

- (b) What constitute a good program ? How the program performance can be measured ? Discuss the guidelines and development techniques for program writing.
3. (a) Given a list of marks ranging from 0 to 100, write a program to compute and print the number of students :
 - (i) Who have obtained more than 80 marks.
 - (ii) Who have obtained more than 60 marks.
 - (iii) Who have obtained more than 50 marks.
 - (iv) Who have obtained 50 or less marks.
 - (v) in the range of 81 to 100.
 - (vi) in the range of 61 to 80.
 - (vii) in the range of 51 to 60.
 - (viii) in the range of 0 to 50.

Use a minimum number of if statements.

Or

Turn over

- (b) Given a number, write a program using while loop to reverse the digits of the number. Also compute the sum of the digits.
4. (a) Given are two one-dimensional arrays A and B which are sorted in ascending order. Write a program to merge them into a single sorted array C that contains every item from arrays A and B, in ascending order.

Or

- (b) Write a program to create a linear linked list and insert elements into the list and view the contents of the list.
5. (a) (i) What are the benefits of object oriented programming ?
(ii) Write notes on object oriented languages.

(8 + 7 = 15 marks)

Or

- (b) What is inheritance ? What are the different types in it ? How inheritance is implemented in C++ ?

[4 × 15 = 60 marks]