UG–473 **BMS–10**

B.Sc. DEGREE EXAMINATION – JANUARY 2009.

(AY – 2005-06 and CY – 2006 batches only)

Third Year

Mathematics

PROGRAMMING IN C AND C++

Time : 3 hours Maximum marks : 75

PART A — ($5 \times 5 = 25$ marks)

Answer any FIVE questions.

1. What is constant? What are the different types of constants in C? Explain in detail.

2. Describe the components of a format specifier in a printf function.

3. What is recursion? It is advantageous to use recursion in programming? Justify your answer with suitable example.

4. Explain string handling functions.

5. What is dynamic memory allocation? Explain how it is used to declare an array.

6. Explain bit fields.

7. Explain the differences between the access modes.

8. Write a program to find whether a given number is prime or not.

PART B — ($5 \times 10 = 50$ marks)

Answer any FIVE questions.

9. Explain priority queues.

10. Explain the operations of linked list.

11. Write a program to read the name in one file and copy the contents to another file.

12. Write a suitable struct data type for an employee using nested struct.

13. Write the declaration for a pointer variable for an array of integers of size 3×4 and allocate a memory for that variable.

14. Explain extern storage class.

15. Write a program to find the value of ${}^{N}p_{r}$.

16. Explain switch statement.