

PGDCA / MCA (I Yr) / BCA**Term-End Examination****December, 2007****CS-02 : INTRODUCTION TO SOFTWARE***Time : 2 hours**Maximum Marks : 60*

Note : Question number 1 is **compulsory**. Attempt any **three** questions from the rest.

1. (a) Design an algorithm and draw a corresponding flow chart to generate the fibonacci series. 7
- (b) Write a shell program to count the number of directories/files existing in a given directory by the user. 8
- (c) Explain the concept of Demand paging. Also, discuss the implementation of demand paging scheme with the help of a diagram. 7
- (d) Mention the general principles of systems investigation and also explain all the stages of systems investigation. 8

2. (a) Write context free grammar (CFG) for a "Goto statement" and "For loop" in C language. 5
- (b) What is meant by Segmentation ? With the help of a diagram, explain the address translation scheme in a segmentation system. 5
3. (a) Explain the use of the following UNIX commands, their syntax and an example for each : 5
- (i) nohup
 - (ii) cp
 - (iii) mv
 - (iv) rmdir
 - (v) cal
- (b) What are Fourth Generation Languages (4GL's) ? How do they help to solve the problems ? Also, mention their limitations. 5
4. (a) Write a shell program to check whether the given substring is existing in the string or not. 4
- (b) Explain the following Disk scheduling algorithms with relevant figures : 6
- (i) FCFS
 - (ii) Shortest seek time first scheduling
 - (iii) Scan scheduling

5. (a) Explain the functional overview of the Macintosh toolbox. List any two applications which can be run on this O/S. 5
- (b) With the help of an example application, explain the client/server model. 5

