

PGDCA / MCA (I Year) / BCA

Term-End Examination

December, 2010

01977

CS-02 : INTRODUCTION TO SOFTWARE

Time : 2 hours

Maximum Marks : 60

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

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1. (a) Design an algorithm and draw a corresponding flow chart to concatenate two given strings. 6
  - (b) Discuss different loader schemes. 6
  - (c) Write a shell program to find the sum of a N digit number. 6
  - (d) Write context free grammar for assignment statement in C-language. 6
  - (e) Compare and contrast the cross compiler with bootstrapping compiler. 6
  2. (a) Discuss an assembler macro facility and its implementation within an assembler with appropriate example. 5
  - (b) Discuss the Round robin scheduling algorithm with its merits and demerits , using an example. 5

3. (a) Differentiate between the following :  $2 \times 3 = 6$
- (i) Spooling and Buffering
  - (ii) Network operating system and Distributed operating system.
  - (iii) Preemptive scheduling and Non-preemptive scheduling.
- (b) Discuss the development environments of GUIs. 4
4. (a) List the Unix commands for the following :  $1 \times 5 = 5$
- (i) To print the last 10 lines of the file
  - (ii) To print the location of just difference between 2 files.
  - (iii) To check whether a particular user has logged in or not.
  - (iv) To find the number of processes running from your login.
  - (v) Change all Characters of a file to uppercase.
- (b) Define fragmentation. How does it occur? Discuss various memory management schemes. 5

5. (a) Discuss Hardware support (including associative memory) for address translation, sharing and protection in a paging system. 5
- (b) Discuss mechanisms for structured form of inter - process communication and synchronization. 5
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