

**2216**

**B.E. 5th Semester (I.T.) Examination,  
December-2012**

**SYSTEM PROGRAMMING AND SYSTEM ADMN.  
Paper-IT-303-E**

Time allowed : 3 hours ] [ Maximum marks : 100

*Note : Attempt any five questions.*

1. (a) What do you understand by system programming ? Explain the evolution of major components of a programming system. 12
- (b) What is loader and linker ? Describe how loader scheme are implemented. Discuss in detail. 8
2. (a) What are compilers ? Draw a block diagram of the phases of a compiler and indicate the main function of each phase. 12
- (b) What is loader ? Why is it needed ? Discuss the working of direct linking. 8
3. (a) What are Macros ? Justify their need. Also define macro instruction with the help of example. 8
- (b) What is macro processor ? In order to be able to process macro in a single pass, we had to restrict

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the macro language. Describe the restriction that it imposes on the program organization. 12

4. (a) What is Operating System ? Discuss salient features of Unix Operating System. 10
- (b) Explain the various Memory Management Scheme used in an operating system. 10
5. (a) In unix operating system, discuss the format of unix commands with example : 10
- (i) Changing your password
  - (ii) Looking at the file and directory contents
  - (iii) Basic operations on files
  - (iv) How to kill a process ?
  - (v) How do you get more detailed about a command ?
- (b) What is editor ? Name the editors that are used in Unix. Explain vi-editor in details (i.e. various modes of operations of vi-editor). 10
6. (a) How would you perform test manipulation under unix environment.
- (i) Printing file
  - (ii) Splitting file

- (iii) Comparing file
- (iv) Translating character
- (v) Searching for pattern. 10
- (b) What is AWK ? Discuss the application area of AWK utility. 10
- 7. (a) Write down the differences between the Bourne and C-shell. 8
- (b) What is shell programming ? Explain
  - (i) Shell variables
  - (ii) Wild cards.
  - (iii) Advanced Features of shell programming. 12
- 8. (a) What is System Administration ? Explain the various roles performed by a System Administrator. 10
- (b) Discuss the salient features of Linux operating system and also differentiate it with Unix operating system. 10