

DiplETE – ET (OLD SCHEME)

Code: DE14

Subject: COMPUTER SOFTWARE FUNDAMENTALS

Time: 3 Hours

Max. Marks: 100

DECEMBER 2009**NOTE: There are 9 Questions in all.**

- Question 1 is compulsory and carries 20 marks. Answer to Q.1 must be written in the space provided for it in the answer book supplied and nowhere else.
- Out of the remaining EIGHT Questions answer any FIVE Questions. Each question carries 16 marks.
- Any required data not explicitly given, may be suitably assumed and stated.

Q.1 Choose the correct or the best alternative in the following: (2 × 10)

a. An algorithm is described as

- (A) a computer language
- (B) a step by step procedure for solving a problem.
- (C) a branch of mathematics
- (D) All of the above.

b. Which of the following files is automatically executed at the time of booting of computer?

- (A) AUTOEXEC.BAT
- (B) DIR
- (C) COPY
- (D) MD

c. The programming language which combines features from both high level and assembly language for development of a system, is

- (A) BASIC
- (B) COBOL
- (C) FORTRAN
- (D) C

d. An application program that helps the user to change any number and immediately see the result of that change is

- (A) Desktop Publishing Program
- (B) Database
- (C) Spreadsheet
- (D) Word

e. The Linker

- (A) is the same as the loader.
- (B) is required to create a load module.
- (C) uses source code as input.
- (D) is always used before programs are executed.

f. UNIX is written in

- (A) C language
- (B) Ada language
- (C) Perl language
- (D) FORTRAN

- g. Cryptography technique is used in
- (A) Policy (B) Job Scheduling
(C) Protection (D) File Management
- h. The main purpose of time sharing techniques used in computers is to make the best use of the
- (A) CPU (B) Peripherals
(C) Secondary storage (D) Floppy disks
- i. Program during _____ is called process
- (A) Execution (B) Waiting
(C) Holding (D) Completing
- j. A file is sometimes called a
- (A) collection of I/P data. (B) data set
(C) temporary place to store data. (D) program.

**Answer any FIVE Questions out of EIGHT Questions.
Each question carries 16 marks.**

- Q.2** a. What are the advantages and disadvantages of Pseudocode? (8)
- b. Draw the basic format of a decision table and discuss the role of each part. (8)
- Q.3** a. Write an algorithm to find the maximum of three numbers. (8)
- b. Write the flowchart symbols for the following operations - Merge, Extract, Offline storage, Printed document, Collate, Communication links, Magnetic disk, Display. (8)
- Q.4** a. Explain the top-down design method of programming. Give the advantages of this method. (8)
- b. Distinguish between
(i) Compiler and Interpreter
(ii) High level language and Machine language (8)
- Q.5** a. Name the four divisions of a COBOL program. What is the purpose of each division? (8)
- b. Describe the use of the following languages. (6)
- (i) BASIC
(ii) FORTRAN
(iii) C

- c. By default how are numeric data and text data aligned in a spreadsheet? (2)
- Q.6** a. Write a C program to generate Fibonacci series (8)
- b. Describe the features of the two types of user interfaces commonly supported in modern operating systems (8)
- Q.7** a. Describe the two popular types of file structures used by operating system (8)
- b. What is internal and external fragmentation of memory? Explain with an example. (8)
- Q.8** a. What are the main reasons for the failure of MS DOS? (8)
- b. What is a word processing package? What are the features supported by word processor? (8)
- Q.9** a. What is a graphics package? What are the features commonly supported by them? (8)
- b. Write Short notes on:- (8)
- (i) Vector graphics
 - (ii) Range of cells
 - (iii) Linker
 - (iv) System Software