

Code: D-14**Subject: COMPUTER SOFTWARE FUNDAMENTALS****December 2005****Time: 3 Hours****Max. Marks: 100****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.
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Q.1 Choose the correct or best alternative in the following: (2x10)

- a. Which of the following files is automatically executed at the time of booting of computer?
- (A) AUTOEXEC.BAT (B) DIR
(C) COPY (D) MD
- b. In a FORTRAN program given $I = 4$, $J = 5$ and $K = 10$, the value of the expression $I * I/J - K * 2/I$ will be
- (A) 2 (B) -2
(C) -2.2 (D) 2.2
- c. In BASIC, descriptive comments are put in the source program with the
- (A) Print statement. (B) Remark statement.
(C) Input statement. (D) Data statement.
- d. The two operators $\&\&$ and $\|\|$ in 'C' package are
- (A) Arithmetic operators. (B) Equality operators.
(C) Logical operators. (D) Relational operators.
- e. A text file has an extension
- (A) .COM (B) .BAT
(C) .BAS (D) .TXT
- f. _____ is the short cut command for opening a new document
- (A) Ctrl N (B) Ctrl O
(C) Ctrl P (D) Ctrl X

- g. "Cascade" is used to
- (A) Append two files. (B) Open multiple files.
(C) Join two words. (D) Insert a picture into a text file.
- h. Compilers can diagnose
- (A) Grammatical errors only. (B) Logical errors only.
(C) Grammatical and logical errors. (D) Neither grammatical nor logical errors.
- i. Which of the following program is not an utility program?
- (A) Debugger (B) Editor
(C) Spooler (D) Defragmenter
- j. _____ technique stores a program on disk and then transfers the program into main storage as and when they are required.
- (A) Spooling (B) Swapping
(C) Thrashing (D) Paging

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

- Q.2** a. Draw a flowchart for obtaining the sum of first N natural numbers. (8)
- b. A company gives the commission to its sales persons on the following basis:
Commission is 1% on the sales less than 1000.
Commission is 5% on the sales greater than or equal to 1000, but less than 10000.
Commission is 10% on the sales greater than or equal to 10000.
Write the pseudocode for the above commission policy. (8)
- Q.3** a. Explain top-down design method of programming. Give the advantages of this method. (8)
- b. Write an algorithm to find the factorial of a given number. (8)
- Q.4** a. Write a program in C to convert the given temperature in Fahrenheit to Centigrade temperature.
Given $C = 5 \times (F - 32) / 9$ (8)
- b. Explain the characteristic features of high level languages. (8)

- Q.5** a. Write a program in BASIC to find the perimeter and area of a rectangle of length ℓ and breadth b . **(6)**
- b. What is a compiler? Why is it required? A computer supports five high level languages. How many compilers are required? In which situations a compiler is preferred over an interpreter? **(2+2+2+4)**
- Q.6** a. What is the necessity of organizing of I/O software into series of layers? Explain the different layers of the I/O system. **(6)**
- b. What is spooling? Why are mutually exclusive I/O devices converted into non-mutually exclusive I/O devices? Explain how they are converted. **(2+2+4)**
- c. How many characters are allowed for a file name in MS-DOS and Microsoft Windows? **(2)**
- Q.7** Differentiate between:
- (i) CPU bound jobs and I/O bound jobs.
 - (ii) Tightly coupled and loosely coupled multiprocessing systems.
 - (iii) Internal fragmentation and External fragmentation.
 - (iv) Multiprocessing and Multiprogramming. **(4 x 4)**
- Q.8** a. Explain how the following actions can be carried out in the word processing packages.
- (i) Entering mathematical equations.
 - (ii) Checking spelling.
 - (iii) Printing a document. **(6)**
- b. Name the commonly used methods for composing graphic objects. Explain them. **(6)**
- c. Explain about the preview feature of a word processing package. **(4)**
- Q.9** a. Give the steps to insert a series of values in continuous locations like names of the months of a year in an EXCEL worksheet. **(4)**
- b. Give the two ways of renaming a sheet in EXCEL. **(4)**
- c. With the help of an example, give the steps to create a data table and draw the pie chart for the same example in an EXCEL spread sheet. **(8)**