DECEMBER 2006
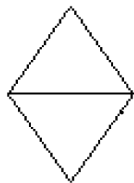
Code: D-14   **Subject: COMPUTER SOFTWARE FUNDAMENTALS**
Time: 3 Hours   **Max. Marks: 100**

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.**

Q.1   **Choose the correct or best alternative in the following:**   **(2x10)**

a.   Algorithms can be represented as

    (A) programs   **(B)** flowcharts
    (C) decision tables   **(D)** all of these

    symbol in a flowchart represents

    (A) online storage   **(B)** offline storage
    (C) sort operation   **(D)** I/O operation

c.   The interval from the time of submission of a process to the time of completion is

    (A) Response time   **(B)** turn around time
    (C) wait time   **(D)** seek time

d.   Structured programming makes use of

    (A) sequence logic   **(B)** selection logic
    (C) iteration logic   **(D)** all of these

e.   Assembler directives are

    (A) pseudocodes   **(B)** guidelines to assembler
    (C) opcodes in assembly language   **(D)** guidelines to the computer

f.   BASIC uses _____ as a language translator

    (A) Assembler   **(B)** Compiler

(C) Interpreter   **(D)** Linker

g. When a job is allocated to CPU for execution, its state changes from

(A) Ready to Running   **(B)** Running to Ready
(C) Ready to blocked   **(D)** Blocked to Ready

h. .man file extension indicates a

(A) Microsoft word document   **(B)** online manual page file
(C) Microsoft Access file   **(D)** online text file

i. $+E9/3$ in a spreadsheet indicates

(A) division operation   **(B)** addition operation
(C) cumulative addition operation   **(D)** extracts the remainder

j. Thesaurus in a word processor gives

(A) Antonyms   **(B)** Synonyms
(C) Meanings   **(D)** Spell checking

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

Q.2   a.   Draw a flowchart to receive numbers from 0 to 100 from the user and print the sum of all even numbers.   **(8)**

b.   Write the flow chart symbols for the following operations:
        Printed document, Display output, Manual input, Manual operation, Communication links, Merge, Sort, Extract.   **(4)**

  c.   Differentiate between system software and application software.
(4)

Q.3   a.   Write a pseudocode to check whether a given triangle ABC is Isosceles or not, based on the angles A, B, C supplied by the user. Print 'Yes' or 'No'.
(8)

b.   What are the merits and demerits of Assembly language?   **(3)**

c.   Write a BASIC program to generate fibo nacci series upto100.   **(5)**

Q.4   a.   Write a C-code to search the second largest element in a numerical array of 10

elements.   **(10)**

b. Differentiate between the following:-
      (i)   Cut-and-paste and copy-and-paste facilities in word-processing package.
      (ii)   Portrait and landscape modes of printing.
      (iii)   Centre and justified text.   **(6)**

Q.5   a.   Write in brief about enhancement of features in WINDOWS as compared to DOS OS.   **(4)**

b. List and explain briefly the main functions of an OS.   **(4)**

c. Given two arrays A and B with elements sorted in ascending order. Write an algorithm to merge A and B into another array C such that elements of C are again sorted in ascending order. **(8)**

Q.6   a. Write a note on time sharing OS.   **(4)**

b. What is external fragmentation? How can it be avoided? Compare it with internal fragmentation.   **(6)**

c. What is a decision table? Give the steps to construct a decision table.   **(6)**

Q.7   a. Make a comparative study of Disk space allocation methods.   **(9)**

b. What is demand paging? Where is it used?   **(4)**

c. What is the difference between multitasking and multithreading?   **(3)**

Q.8   a.   What is the use of 'Mail merge' feature? What are the steps followed in mail merging?   **(6)**

b. What are the four different types of data that can be entered into a cell?   **(6)**

c. What is global search-and-replace, command of a word-processing? Give an example of a situation where it is useful.   **(4)**

Q.9   Write short notes of the following:

      (i)   Programming techniques.
      (ii)   Graphics feature in a spread sheet package.
      (iii)   Command interpretation in OS.
      (iv)   Pre processor.   **(4 × 4 = 16)**