Code: DE14   **Subject: COMPUTER SOFTWARE FUNDAMENTALS**

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. If data is processed as it arrives, this type of data processing is called

(A) Real time processing.   (B) Batch processing.
(C) Off line processing.   (D) Distributed processing.

b. The memory that is to be refreshed many times per second is

(A) SRAM   (B) DRAM
(C) EPROM   (D) EAROM

c. The printer that prints a page at a time is

(A) Dot matrix printer   (B) Thermal wax
(C) laser printer   (D) Inkjet printer

d. The operating system that uses write through cache is

(A) UNIX   (B) DOS
(C) ULTRIX.   (D) XENIX

e. Moving process from a main memory to a disk is called

(A) Scheduling   (B) Caching
(C) Swapping   (D) Spooling

f. Preparing a magnetic disk for data storage is called

(A) Booting   (B) Formatting
(C) Debugging.   (D) Commissioning

g. While running DOS on a PC, the command that in used to duplicate the entire diskette?

(A) COPY.   (B) DISK COPY
(C) CHK DISK.   (D) TYPE

h.   While using DIR command, _____ which option, amongst the following cannot be used with it

   (A) /P.   (B) /W.
   (C) /S.   (D) /T

i.   _____ is not an utility program

   (A) Debugger   (B) Editor.
   (C) Spooler.   (D) Defragmenter.

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

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

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

Q.2 a. Draw a flow chart to find the sum of the series $S = 1^2 + 2^2 + 3^2 + 4^2 + \ldots + n^2$.   **(8)**

b. Construct a decision table to find out whether a given triangle ABC is isosceles or not. **(8)**

Q.3 a. From the given three sides of a triangle, write an algorithm to find whether a triangle can be formed or not.   **(8)**

b. Compare the modular programming technique with structured programming technique. **(8)**

Q.4 a. Write a program in FORTRAN to read two positive real numbers and print the largest among them.   **(8)**

b. Give the advantage of high level languages over the assembly language and machine languages.   **(8)**

Q.5 a. COBOL is often referred as a self-documenting language. Explain?   **(6)**

b. Explain the errors that cannot be detected by a compiler.   **(4)**

c. How are the multiple source program files compiled and linked to generate executable program?   **(6)**

Q.6   a.   Explain the three methods used for disk spaced allocation.   **(8)**

      b.   Name the special categories of software that improve the capability of the software. Explain the category, which deals with system maintenance tests.   **(8)**

Q.7   a.   Give the advantages and disadvantages of Linux.   **(8)**

      b.   List the advantages and limitations of multiprocessing systems.   **(4)**

      c.   List and briefly explain the functions of operating system.   **(4)**

Q.8   a.   What is absolute cell addressing in a worksheet? How does it differ from relative cell addressing?   **(4)**

      b.   What are the two types of data that can be inserted in a cell of a worksheet? Give examples.   **(4)**

      c.   Explain the steps followed to insert a formula in the cell of a work sheet.   **(4)**

      d.   Give the sequence of steps to draw the bar graph in an EXCEL spread sheet with an example.   **(4)**

Q.9   a.   What is justification? Explain briefly the ways a paragraph in a MS word document can be justified.   **(6)**

      b.   Write a short note on features: Drag-and-drop objects, and paint drawings and pictures of a graphic package. **(6)**

      (6)

      c.   Write the steps to create a table with 5 rows and 4 columns indicating item, rate, quantity and amount. Fill the amount column automatically by inserting a formula.   **(4)**