BACHELOR OF COMPUTER APPLICATIONS (REVISED) (BCA)

Term-End Examination
June, 2024
BCS-011 : COMPUTER BASICS AND PC SOFTWARE

Time : 3 Hours   *Maximum Marks : 100*

Weightage : 75%

Note : *Question No. **1** is compulsory and carries 40 marks. Attempt any **three** questions from Question Nos. **2** to **5**.*

1. (a) Explain the role of RAM in a computer system. Most of the computer system has very large capacity hard disk, why such a computer need RAM ? Explain.   5

(b) Which I/O devices would be needed to perform each of the following tasks ? Also,

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list the characteristics of the I/O devices, identified for tasks given below :   5

(i)   A device to cause movement of pointer on a screen and selection of pointed information.

(ii) A device that can help in input of pictures.

(c) Perform the following conversions :   4

(i)   Convert $(2.125)_{10}$ to equivalent binary.

(ii) Convert $(1100\ 0011)_2$ to equivalent hexadecimal and decimal.

(d) "A program written in high-level programming language is to be converted into object code." Which software would be required for the task as given above ? Explain the characteristics of that software.   4

(e) Draw a flow chart to add all numbers from 1 to 20. Explain the logic of your flow chart with suitable algorithm.   6

(f) What are the uses of database management systems ? List any *three* functions of MS-Access.   4

(g) Differentiate between the following :   12

   (i) Twisted pair cable and Optical fiber

   (ii) Radio waves and Microwaves

   (iii) Ring topology and Star topology

   (iv) Collaboration networking and Social networking

2. (a) What is a CPU in a computer ? What are its components ? Explain the role of each component of the CPU.   5

   (b) What would be the storage capacity of a 2 inch diameter disk pack having 8 plates, with 2048 tracks on a surface. Each track has 512 sectors and each sector can store 1 kB data.   4

   (c) Explain the term access time in the context of a hard disk with the help of an example.   5

(d) Explain the following utility software of a computer : 6

   (i) Disk checker

   (ii) System restore

   (iii) Disk defragmenter

3. (a) What is an Operating System ? Explain various services offered by an operating system. 10

  (b) Explain the following with the help of an example for each : 10

   (i) Data types

   (ii) One-dimensional arrays

   (iii) Subroutines

   (iv) Expression

   (v) Library function

4. (a) Explain the role of the following networking devices : 8

   (i) Bridges

   (ii) Switches

   (iii) Modem

   (iv) Router

(b) What is an IP address ? How is a URL translated to an IP address ? Explain with the help of an example. 6

(c) What is a browser ? List any *five* precautions, which will make you less vulnerable to security threats while browsing. 6

5. Explain the following with the help of a diagram/example, if needed : 5×4=20

(a) Search engines

(b) Open source software

(c) Client-server architecture

(d) Integrated circuits

(e) Printing technologies

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