BACHELOR OF COMPUTER APPLICATIONS (BCA) (REVISED)

Term-End Examination

December, 2023

BCS-011 : COMPUTER BASICS AND PC SOFTWARE

Time : 3 Hours   *Maximum Marks : 100*

(Weightage : 75%)

Note : *(i)* *Question No.* ***1*** *is compulsory and carries 40 marks.*

(ii) *Attempt any* ***three*** *questions from the Question No.* ***2*** *to* ***5***.

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1. (a) Convert the following as asked :   6

    (i) $(0.0125)_{10}$ to equivalent binary

    (ii) $(10011111)_2$ to equivalent decimal

    (iii) $(FA5)_{16}$ to equivalent binary

    (iv) $(1001 \quad 0110 \quad 1110)_2$ to equivalent hexadecimal

    (b) A computer system has large RAM, still it requires secondary storage. Why ? Explain.   4

    (c) Explain the use and characteristics of the following input-output devices :   4

    (i)   Bar Code Reader

    (ii) Speaker and Microphone

    (d) Explain why an operating system is needed in a computer system. Differentiate between the system software and application software.   5

(e) What is an algorithm ? What are the three control statements in the context of algorithm ? Explain each statement with the help of an example. 7

(f) List any *two* features of a spreadsheet software. 2

(g) Explain the ring topology of local area networks. List its advantages and disadvantages. 6

(h) Explain the purpose of any *four* folders that are available in an email software. 4

(i) List any *four* features of a social networking website. 2

2. (a) What are the different components of a computer ? Explain the role of each component with the help of a diagram. 6

(b) Differentiate between the following :   8

   (i)   CD-ROM and Hard disk

   (ii)   Seek time and Latency time in the context of access time

   (iii) Cache memory and Main memory

   (iv)   Transistor and Vacuum tube

(c) What is a port ? Explain the uses of parallel port, serial port, universal serial bus and SCSI port.   6

3. (a) Explain the three-tier client-server architecture with the help of a diagram.   5

   (b) What is multiprogramming ? How is it different from batch processing ? Explain. 5

   (c) Explain the concept of one-dimensional and two-dimensional arrays with the help of an example pseudo code of each.   5

(d) Explain the features of word processing application. 5

4. (a) Explain the characteristics of a Wide Area Network. How is a WAN different to a LAN ? Explain. 5

(b) What is the need of TCP/IP ? What is a URL ? How is URL different to an IP address ? Explain with the help of an example. 5

(c) What is the role of a browser software ? What is a search engine ? How does a search engine collects information about web page ? 5

(d) What are the characteristics of a WIKI ? What are the different advantages of using a WIKI ? 5

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

    (a) Features of E-learning

    (b) Perverse Software

    (c) Features of project management software

    (d) Different types of printers

    (e) Disk checkers and disk defragmenters