BACHELOR OF COMPUTER APPLICATIONS (BCA)

(REVISED)

Term-End Examination

December, 2019

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 the rest.***

1. (a) Convert the following decimal numbers to equivalent binary number :   2

    (i) 37

    (ii) 0.125

(b) Convert the following hexadecimal number to equivalent binary :   2

$$(FA3)_{16}$$

(c) What will the storage capacity of a disk of 2.5 inch diameter 8 plates (16 recording surfaces) with 512 sectors per track and 2048 tracks per recording surface ? Assume that one sector can store 1048 bytes of data.   2

(d) Differentiate between the parallel port and serial port of a computer.   2

(e) What is an integrated circuit ? Is microprocessor an integrated circuit ?   2

(f) Explain the concept of memory hierarchy with the help of a diagram.   4

(g) Draw a flowchart to find if the given number is odd. 5

(h) What is the file management in the context to operating system ? How does file management system keeps track of a file ? Explain. 5

(i) What is the role of compiler in a computer system ? 3

(j) Which of the following are valid IPv4 address ? Give justification : 3

   (i) 256.0.0.0

   (ii) 192.168.1.27

   (iii) 10.0.5.7.5

(k) What is meant by the term 'Network Topology' ? Explain the bus topology with

the help of a diagram. List the advantages

and disadvantages of bus topology.   6

(l) What is e-Learning ? What are its

advantages and disadvantages ?   4

2. (a) Explain the *three* modes of data

transmission.   5

(b) What is URL ? Why is it needed ? Explain

various parts of a URL with the help of an

example. How URL is translated to

physical address of the resource ? Explain

with the help of an example.   8

(c) Explain the following terms in the context

of a search engine :   2+3+2=7

(i)   Spidering or Web Crawling

(ii) Indexing

(iii) Searching

3. (a) What is Computer Virus ? How is it different from Trojan Horse in the context of a computer ? List the ways to counter the perverse software.   7

(b) Explain the following features of an application software :   8

(i) Mail merge in word processing

(ii) Macros in spreadsheet

(iii) Defining relationship in Database Management System

(iv) Scheduling in Project Management Software

(c) Differentiate between the open source software and proprietary software.   5

4. (a) Explain the role of various components of a computer system with the help of a diagram. 5

(b) Differentiate between the following : 10

   (i) Serial Access and Random Access

   (ii) RAM and ROM

   (iii) SRAM and DRAM

   (iv) ROM and PROM

   (v) Inkjet Printer and Laser Printer.

(c) What are utility software ? Explain the use of disk checker and disk defragmenter utility software. 5

5. Explain any *five* of the following with the help of an example/diagram, if needed : 5×4=20

(a) Web Browser

(b) Optical Memories

(e) ASCII and Unicode

(d) Looping Statement

(e) Kernel of an Operating System

(f) Linker and Text Editors

(g) Hub and Switches (Networking devices)

(h) WIKI

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