BACHELOR OF COMPUTER APPLICATION (REVISED) (BCA)

Term-End Examination

December, 2020

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) Perform the following :   6

   (i) Convert   the   number $(16.25)_{10}$ to binary.

   (ii) Convert the number $(1011\ 1010)_2$ to decimal.

(iii) Convert the number $(ABC)_{16}$ to binary.

(iv) Convert the number $(110011\ 1001)_2$ to hexadecimal.

(b) List the input/output devices for the following situations. Also describe the features of the device.   4

(i) For taking photographs

(ii) Producing output of photograph

(iii) Input of voice

(iv) Output of voice

(c) What is the role of main memory in a Computer ? Why is it called RAM ? How is RAM different from ROM ?   4

(d) You have attached a new printer to your computer. Which software will you require so that printer is installed correctly and starts to print. List features of the required computer software.   3

(e) Draw a flowchart for a program to find the average marks of the students of a class in a subject. The class strength is 15.   5

(f) List **six** operations that can be performed using a word processor.   3

(g) Explain the characteristics of hub and a router. Which of the two will be needed if your want to connect from one network to another ?   5

(h) What is an IPv4 address ? What are its components ? What is the use of a subnet mask ? Explain with help of an example. 6

(i) What is a Browser ? Why is it needed ? List any **two** features of a browser.   4

2. (a) What is the role of Arithmetic Logic Unit (ALU) and Control Unit (CU) in a computer ?   4

   (b) What is a Super Computer ? How is it different to mainframe computer ?   4

P. T. O.

(c) What are the uses of magnetic tape ? Explain, how is the access mechanism of magnetic tape different than that of magnetic disks. 4

(d) Explain the terms pixel, resolution and LEDs in the context of computer monitors.

4

(e) Explain the role of "Recycle Bin" and "Taskbar" on windows operating system. 4

3. (a) What are various components of a Local Area Network (LAN) ? What are the advantages of using LANs ? How are LAN different than WANs ? 6

(b) Explain the ring topology with the help of a diagram. List the advantages and disadvantages of ring topology. 6

(c) Explain the following web application giving their features and advantages : 8

(i) E-learning

(ii) E-mail

4. (a) What is a Computer Virus ? What role can anti-virus software play to control a computer virus ? 4

   (b) What are open source software ? What are the primary objectives of open source movement ? 4

   (c) What Graphical User Interface ? What are advantages of using these interfaces ? 4

   (d) Explain the terms subroutine and function in the context of programming languages with the help of an example each. 5

   (e) What is meant by Macros in the context of spreadsheet software ? Why are they needed ? 3

5. Discuss the uses of any *eight* of the following in a computer system/networking : $2\frac{1}{2} \times 8 = 20$

   (i) Firewall

   (ii) TCP/IP Protocol

   (iii) Radio waves

   (iv) Twisted Pair Cable

P. T. O.

(v) Compiler

(vi) Linker

(vii) Presentation Software

(viii) Database Management

(ix) ASCII

(x) DVD

(xi) Mouse

(xii) Bar code reader

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