

**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

- (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

- (v) Compiler
- (vi) Linker
- (vii) Presentation Software
- (viii) Database Management
- (ix) ASCII
- (x) DVD
- (xi) Mouse
- (xii) Bar code reader