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BCS-011

**BACHELOR OF COMPUTER
APPLICATIONS (BCA)**

Term-End Examination

December, 2022

**BCS-011 : COMPUTER BASICS AND PC
SOFTWARE**

Time : 3 Hours

Maximum Marks : 100

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

(ii) *Attempt any **three** questions from the rest.*

1. (a) Do the following conversions : 8
- (i) $(37.5)_{10}$ to Binary
 - (ii) $(100100101101)_2$ to Hexadecimal
 - (iii) $(ABE)_{16}$ to Binary
 - (iv) $(574)_8$ to Decimal

P. T. O.

- (b) What is main memory of the computer and why is it needed ? Explain briefly the various types of main memory. 5
- (c) Why are the arrays used in programming ? Explain with the help of an example of one-dimensional array. 3
- (d) Differentiate between the following : 6
- (i) Subroutine and Function
 - (ii) Modem and Router
 - (iii) URL and IP address
- (e) What are communication ports and why are they needed ? Explain parallel ports and serial ports. 5
- (f) Why do computer systems need Antivirus Softwares ? Which technique do antivirus programs use to identify viruses ? 5
- (g) Write short notes on the following : 8
- (i) E-learning
 - (ii) Security threats on Internet
2. (a) What is CPU ? Describe the structure of the CPU and explain its components with the help of a diagram. 8

- (b) What is Operating System ? What kind of services does operating system provide to users and programs ? 6
- (c) How does data get transmitted via unguided transmission media ? Explain the radio, microwave and infrared modes of wireless transmission. 6
3. (a) What are Optical Memories ? Explain briefly any *four* types of optical disks. 8
- (b) What is cloud computing ? Explain the various cloud services and how they benefit organizations. Describe key features and benefits of cloud based solutions. 7
- (c) What are open source software and why are they in demand ? List the key criterion of OSD compliance. 5
4. (a) Discuss the key characteristics of printers on the basis of quality of print. 4
- (b) What are utility softwares ? Explain the following utility softwares : 10
- (i) Disk Defragmenter
 - (ii) CHKDSK
 - (iii) Data compression
 - (iv) Disk management

- (c) Describe the TCP/IP model with the help of a diagram. 6
5. (a) Draw a flowchart to find whether a given number is even or odd. 6
- (b) What is software project management ? Explain various project management activities. 8
- (c) What is mail merge? Explain various steps of mail merge with the help of an example. 6