

**BACHELOR OF COMPUTER APPLICATIONS
(BCA) (Revised)**

Term-End Examination

15805 December, 2016

BCS-011 : COMPUTER BASICS AND PC SOFTWARE

Time : 3 hours

Maximum Marks : 100

(Weightage : 75%)

Note : Question number 1 is compulsory and carries 40 marks. Attempt any three questions from the rest.

1. (a) Convert the following hexadecimal numbers to equivalent decimal numbers and binary numbers : 4
- (i) $(79)_{16}$
- (ii) $(AC)_{16}$
- (b) What will be the storage capacity of a 2.5 inch diameter disk pack having 4 plates, 150 sectors per track, 2048 tracks per surface with each sector capable of storing 1024 bytes ? 4

- (c) Discuss the uses of various components of a computer as defined in Von Neumann architecture. 5
- (d) Explain Compilers, Debuggers, Linkers and Text Editors in the context of programming software. 6
- (e) What is an algorithm ? What is the relation between a flow chart and an algorithm ? Draw a flow chart to find the sum and average of marks of a student in 5 different subjects. Marks are given out of 100. 8
- (f) Which of the following is a valid Internet Protocol Address ? Justify. 3
- (i) 192.168.5.512
- (ii) 172.-2.1.0
- (iii) 56.26.257
- (g) What are the advantages of using Local Area Networks ? List the characteristics of LANs. How are Wide Area Networks different from Local Area Networks ? 7
- (h) What is a web browser ? Why is it needed ? Name at least three popular web browsers. 3

2. (a) What is memory hierarchy ? Explain with the help of a diagram. Why is memory hierarchy created in a computer system ? 7
- (b) What is perverse software ? List various types of perverse software. Give four ways to counter perverse software. 8
- (c) Explain any five features of a spreadsheet software. 5
3. (a) An organization designs and develops programs as projects. The progress of projects needs to be monitored in terms of content and finance. Recommend some application software for the organization. Also explain the features of this software related to various phases of the software development. 10
- (b) What is wiki ? List the characteristics of wiki. Can wiki be used for collaboration ? Explain. 5
- (c) What is MOODLE ? Discuss the merits and demerits of E-Learning. 5
4. (a) What are different types of optical disks ? Explain their features and give their advantages. 8
- (b) Explain at least four important features of the following software applications : 12
- (i) E-mail
- (ii) Database
- (iii) Word Processing

5. Explain any *five* of the following with help of an example/diagram, if required : 20

- (a) The activities/actions performed by a search engine
 - (b) Use of subroutines and functions
 - (c) TCP/IP model
 - (d) Security threats on Internet
 - (e) Batch systems and Time sharing operating systems
 - (f) Diagnostic tools in a computer
 - (g) Mainframe computers and Supercomputers
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