

**BACHELOR OF COMPUTER
APPLICATIONS (Revised)**

Term-End Examination

June, 2013

**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 decimal numbers to equivalent binary and hexadecimal numbers : 5
(i) 225
(ii) 62.5
- (b) Express the capacity of a magnetic disk of diameter 2.5 inch. The disk has 4 plates. Each plate surface has 5000 tracks. Each track has 16 sectors with each sector having a capacity of 1 MB. 4
- (c) What is the purpose of Central Processing Unit in a Computer ? What are the components of a CPU ? What effect did Integrated circuit technology had on the CPU ? Explain your answer. 5

- (d) Name and explain the purpose of any four types of software used in programming. 6
- (e) Draw a flow chart for a program that calculate the factorial of a number. Please note that factorial is defined as $n! = n \times (n-1) \times (n-2) \times \dots \times 3 \times 2 \times 1$. 6
- (f) What is the use of TCP/IP Protocol ? Describe the TCP/IP (layers) model with the help of a diagram. Explain the function of Transport layer and Internet layer of the model. 8
- (g) Define the terms confidentiality, Integrity and Availability in the context of Internet security. 3
- (h) What is a blog ? What are its advantages ? What precautions should you follow while blogging ? 3
2. (a) Explain the role and features of : 8
- (i) Processor internal memories
 - (ii) Cache memory
 - (iii) Primary memory
 - (iv) Secondary memory

- (b) Define the following terms in the context of a programming languages with the help of an example : 7
- (i) Variable
 - (ii) Constants
 - (iii) Data types
 - (iv) Array
 - (v) Expression
- (c) What is a URL ? What is the need of DNS in Internet ? Explain with the help of an example. 5
3. (a) A University designs and develops programmes as projects. It needs to monitor the progress of the projects. The programme development process requires financial monitoring as well as content development. Suggest three important application software for the university. Explain the features of these software that may be used by the university. 10
- (b) What is collaboration in the context of World Wide Web (WWW) ? What are the characteristics of WIKI ? Can you use Wiki for collaboration ? Justify your answer. 5
- (c) Explain application of computer systems in the area of banking and education. 5

4. (a) What is the meaning of term "topology" in the context of Computer Networks ? Explain any two LAN topologies giving their advantages and disadvantages. 9
- (b) Differentiate between the following : 6
- (i) Desktop Computer versus Mainframe Computer
 - (ii) Impact printers versus non - impact printers
 - (iii) Open source software versus proprietary software
- (c) What is motherboard ? Briefly explain different parts of a motherboard. 5
5. Explain *any five* of the following phrases/terms with the help of example/diagram, if needed. 20
- (a) Computer Virus
 - (b) Network Interface Card
 - (c) Wide Area Network (WAN)
 - (d) Guided Transmission Channels
 - (e) Any two source data entry devices
 - (f) File Management in Operating System.
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