

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

**Term-End Examination**

**December, 2017**

10460

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

*Time : 3 hours*

*Maximum Marks : 100*

*(Weightage : 75%)*

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

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1. (a) Convert the following decimal numbers to binary number and hexadecimal number : 4
  - (i) 125
  - (ii) 0.025
- (b) Define the term Main Memory. List the differences between RAM and ROM. 4
- (c) Define the terms Tracks, Sectors and Cylinders in the context of a hard disk. A disk pack has 12 platters (plates) having 2048 tracks on every surface. It can store 1024 bytes per sector (assume each track has 512 sectors). Calculate the storage capacity of this disk in gigabytes. 6

- (d) List two functions of File management and three functions of Memory management systems in the context of Operating systems. 5
- (e) What is the role of a Compiler in a computer ? How is a Compiler different from an Interpreter ? 5
- (f) List the advantages of using formulae and macros in a spreadsheet software. 3
- (g) For the following IPv4 subnet masks, what would be the size of Net ID and Device ID ? 4
- (i) 255.255.0.0
- (ii) 255.255.255.0
- (h) What is LAN ? What are the advantages of LAN ? 5
- (i) What are the features of a browser software ? 4
2. (a) What is a Parallel port ? How is it different from a Serial port ? For connecting a printer, which of the two (serial/parallel) ports will be preferred ? Justify your answer. 6
- (b) Draw a flowchart to find the sum of the first n natural numbers. 8
- (c) What is a Wiki ? What are its characteristics ? How can it be used for educational purposes ? Explain with the help of an example. 6

3. (a) What is meant by Open Source Software ? Explain the developmental model and licensing of open source software. 6
- (b) Explain the uses and functions of the following networking devices : 8
- (i) Modem
  - (ii) Repeater
  - (iii) Router
  - (iv) Gateway
- (c) What are the various components of a CPU ? Explain the role of each component. How is a CPU interfaced with memory ? Explain. 6
4. (a) Differentiate between the following : 6
- (i) Packet and Circuit switching
  - (ii) Full-duplex and Half-duplex data transmission
  - (iii) Twisted pair and Optical fibre cable
- (b) Explain the advantages of source data-entry devices. Describe the features of any three source data-entry devices. 8
- (c) Explain the features of Procedural Programming Languages with the help of an example. How is Object Oriented Programming different from Procedural Programming ? 6

5. Explain any *five* of the following with the help of an example/diagram, if required : 5×4=20

- (a) Disk Defragmenter
  - (b) Workstation
  - (c) CD-ROM Disk Layout
  - (d) Advantages of e-mail
  - (e) Two-Tier Client-Server Architecture
  - (f) Features of Project Management Software
  - (g) Moodle
  - (h) DNS
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