

# END TERM EXAMINATION

FIRST SEMESTER [BCA] DECEMBER 2016

Paper Code: BCA-107

Subject: Introduction to Computer and Information Technology

Time: 3 Hours

Maximum Marks: 75

Note: Attempt any five questions including Q no.1 which is compulsory. Select one question from each unit.

- Q1 Answer the following questions:- (2.5x10=25)
- (a) List out and explain some of the parameters that were traditionally used to classify computers.
  - (b) What is an instruction set?
  - (c) What is difference between data and information?
  - (d) List out and explain some of the important characteristics of a computer.
  - (e) What is meant by garbage-in-garbage-out?
  - (f) What is an input interface? How does it differ from an output interface?
  - (g) What is the value of the base for decimal, hexadecimal, binary and octal number system?
  - (h) Define the term 'byte'. What is the difference between a bit and a byte?
  - (i) Differentiate between static and dynamic RAMs.
  - (j) What is a secondary storage? How does it differ from a primary storage?

## UNIT-I

- Q2 Explain the following:- (2.5x5=12.5)
- (a) World Wide Web
  - (b) Optical disk
  - (c) Flowchart
  - (d) Protocols
  - (e) Modem
- Q3 Describe the following:- (2.5x5=12.5)
- (a) Network Topologies
  - (b) Ethernet
  - (c) Web server
  - (d) Data transmission mode
  - (e) The OSI model

## UNIT-II

- Q4 Convert the following:- (2.5x5=12.5)
- (a) Convert 23 from base 10 to base 8.
  - (b) Convert 101010101 from base 2 to base 16.
  - (c) Convert 234 from base 8 to base 10.
  - (d) Convert E16 from base 16 to base 10.
  - (e) Perform binary addition of (+12) + (+15)
- Q5 Differentiate between the following:-
- (a) 1's complement and 2's complement of binary system (3)
  - (b) Positional and non-positional number system (3)
  - (c) Octal number system and hexadecimal number system (3)
  - (d) ASCII coding scheme and EBCDIC coding scheme (3.5)

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**UNIT-III**

- Q6 Answer the following:-
- (a) Define and distinguish between application software and system software. Explain the differences among assemblers, compilers and interpreters. **(6)**
  - (b) Classify the operating system into different types based on their processing capability. List the main function of the operating system and describe in details. **(6.5)**
- Q7 Differentiate between the following:- **(2.5x5=12.5)**
- (a) Pseudo code and Flowchart
  - (b) Selection and Iteration
  - (c) Procedure-oriented and Object-oriented languages
  - (d) Low-level and High-level language
  - (e) Multiprocessing and multitasking

**UNIT-IV**

- Q8 Write short notes on the following:- **(2.5x5=12.5)**
- (a) Component of computer
  - (b) Fifth generation computer
  - (c) Storage unit
  - (d) Applications of computer
  - (e) Central Processing Unit
- Q9 Differentiate between **(any two)**- **(6.25x2=12.5)**
- (a) Sequential access device and Direct access device
  - (b) Primary memory and Secondary memory
  - (c) Optical disk and Hard disk
  - (d) OCR and OMR
  - (e) Impact printer and impact less printer

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