(Please write your Exam Roll No.) *Exam Roll No.* 4061420016

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)**

P.T.O.

BCA-107
P1/2

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

****