(Please write your Exam Roll No.) Exam Roll No. 30321402014

END TERM EXAMINATION

FIRST SEMESTER [BCA] DEC.2014 – JAN.2015

Paper Code: BCA107 **Subject: Introduction to Computers & IT (Batch: 2011 onwards)**

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 Attempt **any ten** questions of the following:- **(2.5x10=25)**

(a) List and explain important characteristics of a computer.
(b) Explain the 5 basic functions performed by a computer system.
(c) Differentiate between static and dynamic RAM.
(d) Distinguish between a sequential access, a direct access and a random access storage device.
(e) Draw a flowchart to print the list of all students who have above 50 marks in a class.
(f) What is an assembler?
(g) Convert (i) $(5263)_{10}=(\ )_{16}$ (ii) $(101100011101)_2=(\ )_8$.
(h) Explain various functions performed by an operating system in a computer.
(i) Explain the data transmission modes.
(j) Write short note on file transfer protocol.
(k) Write BCD codes for (i) $(45)_{10}$ (ii) $(256)_{10}$.
(l) Distinguish between LAN, MAN and WAN.

UNIT-I

Q2 (a) What is generation in computer terminology? Explain various computer generations along with key characteristics of computers of each generation. **(6.5)**
(b) Write short notes on - (i) Cache memory (ii) CD-ROM. **(6)**

Q3 (a) What is an output device? Explain some commonly used output devices. **(6.5)**
(b) Write short notes on - (i) Optical Mark Reader (ii) Image Scanner. **(6)**

UNIT-II

Q4 Differentiate between the following:- **(3.5+3+3+3)**

(a) Low-level and High-level languages
(b) Linker and Loader
(c) Compiler and Interpreter
(d) System software and Application software

Q5 (a) What is an operating system? Explain the different types of operating system. **(6.5)**
(b) Write the algorithm, pseudocode and draw a flowchart to add all even numbers from 1 to 100. **(6)**

UNIT-III

Q6 (a) Convert the following:- **(6)**

(i) $(33.63)_{10}=(\ )_2$ (ii) $(45.6)_{10}=(\ )_8$ (iii) $(634)_{10}=(\ )_{16}$
(iv) $(111000)_2=(\ )_{16}$ (v) $(101.1011)_2=(\ )_{10}$ (vi) $(A34)_{16}=(\ )_2$

(b) Perform the following:- **(2+2+2.5=6.5)**

(i) $(11101)_2+(1011)_2=(\ )_{10}$ (ii) $(11.110)_2+(101.1)_2=(\ )_{10}$ (iii) $(11000)_2-(101)_2=(\ )_{10}$

Q7 (a) Perform the following conversions:- **(6)**

(i) $(125)_{10}=(\ )_4$ (ii) $(ABC)_{16}=(\ )_8$ (iii) $(2B.D4)_{16}=(\ )_2$

(b) Write short notes on the following:- **(2+2+2.5=6.5)**

(i) BCD code (ii) Grey code (iii) Representation of negative numbers

UNIT-IV

Q8 Write short notes on the following:- **(2.5x5=12.5)**

(a) Network topologies (b) Telnet (c) URL (d) World Wide Web (e) Electronic mail

Q9 (a) Explain web servers, web browsers and search engines. **(6)**
(b) Explain the uses of internet. **(6.5)**

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