

(Following Paper ID and Roll No. to be filled in your Answer Book.

PAPER ID : 1101

Roll
No.

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BCA Examination 2014 - 2015

(First Semester)

COMPUTER FUNDAMENTAL

Time : 3 Hours]

[Maximum Marks : 100

Note :- Attempt all questions.

SECTION - A

1. (a) Fill in the blanks : 15
- (i) The output quality of a printer is measured by
 - (ii) designed the first electronic computer - ENIAC.
 - (iii) A computer program that converts an entire program into machine language is called a/an
 - (iv) The access method used for magnetic tape is

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- (v) The difference between memory and storage is that the memory is and storage is
- (vi) The language that the computer can understand and execute is called
- (vii) Operating system is
- (viii) Using 2's complements, subtraction of $(1010)_2$ from $(0011)_2$ is
- (ix) The binary system, $1 + 1 =$
- (x) A common topology to any network is topology.
- (xi) 'C' is a generation high level language.
- (xii) A computer program that translates one program instructions at a time into machine language is called a/an
- (xiii) A small or intelligent device is so called because it contains within it a
- (xiv) ISO model has layers.
- (xv) EBCDIC stands for

- (b) True and False : 5
- (i) The language that the computer can understand and execute is called machine language.
 - (ii) RAM is non-volatile memory.
 - (iii) Half adder is logic circuit that adds two digits at a time.
 - (iv) Multiplexer means one to many.
 - (v) ASCII code is a 7 bit code.

SECTION - B

2. Attempt any three question : $3 \times 10 = 30$

(a) (i) What is a computer? Draw and discuss a block diagram of a computer system.

(ii) Convert the following :

(a) Binary to octal

$$(1101011.1011)_2 = (\quad)_8$$

(b) Octal to binary

$$(27.35)_8 = (\quad)_2$$

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(c) Binary to hexadecimal

$$(1001011.1101)_2 = (\quad)_{16}$$

(d) Hexadecimal to binary

$$(27.35)_{16} = (\quad)_2$$

(e) Binary Coded Decimal (BCD) number

$$(256)_{10} = (\quad)_{\text{BCD}}$$

- (b) (i) List and explain the types of computer.
(ii) Explain volatile memory and non volatile memory.
- (c) (i) What are the main services of operating system?
(ii) Differentiate between multi - programming and multiprocessing system.
- (d) (i) Discuss and differentiate between compiler and interpreter.
(ii) What is secondary memory? Explain Floppy Disk.

- (e) (i) What are the different types of network topology?
- (ii) Differentiate between asynchronous and synchronous transmission.

SECTION - C

5×10=50

3. (a) Differentiate between twisted pair cable and optical fiber.

OR

- (b) Explain in details following parts of microprocessor - ALU, Registers and control unit.
4. (a) Discuss the role of operating system as a resource manager in the life cycle of a process.

OR

- (b) Why is spooling required in batch operating system?
5. (a) An error in software or hardware is called a bug. What are the alternative computer jargon for it? Explain with suitable example.

OR

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- (b) What is the difference between simplex and full-duplex transmission?
6. (a) What is a computer virus and worms? Explain different types of malware codes.

OR

- (b) Explain high level languages. Also explain different types of high level languages.
7. (a) Explain the terms of data communication with suitable examples and what are its main objectives?

OR

(b) Explain the following :

- (i) LAN and WAN
- (ii) WWW
- (iii) Intranet
- (iv) ISP
