

Roll No.

S-7018

BCA IInd Semester Examination, 2017

BCA (204)

Paper Fourth

Digital Electronics

Time : 3 Hrs.]

[M.M. : 70

Note : Attempt any four questions. All questions carry equal marks.

1. (a) Define computer & its characteristics.
(b) Explain generation of computer hardware.
2. (a) Explain binary, octal & hexadecimal number system.
(b) Convert the following no. as indicated :
(i) Decimal 225 to binary, octal & hexadecimal.
(ii) Binary 1101011.110 to decimal, octal & hexadecimal.
3. (a) Define half adder & full adder with truth table.
(b) Explain encoder & decoder. Design a 40 : 1 multiplexer using 8 : 1 multiplexers.
4. (a) Explain the subcycles or phases of an instruction cycle.
(b) Define stack organization. Also write the sequence of microoperation for PUSH & POP operation.
5. (a) Define instruction formats. Evaluate $X = (A + B) * (C + D)$ arithmetic statement using zero, one & two address instructions.
(b) Explain different addressing modes with suitable example.
6. (a) Explain memory hierarchy. Compare primary memory & secondary memory.
(b) Explain different modes of data transfer to and from peripherals.
7. Write short notes on any four :
(a) Logic crates
(b) C.P.U.
(c) R.A.M. & R.O.M.
(d) Hit/miss ratio
(e) Hardwired control unit
(f) Asynchronous data transfer

(95)

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