

9. Explain the following with examples :

(a) IOP and its applications.

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(b) Machine instruction and interrupt structure.

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Roll No.

97666

BCA 2nd Semester

Examination – July, 2022

LOGICAL ORGANIZATION OF COMPUTER

Paper : BCA-107

Time : Three hours]

[Maximum Marks : 80

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt *five* questions in all, selecting *one* question from each Unit. Question No. 1 is *compulsory*. Each question carry equal marks.

1. Answer the following questions briefly : 2 × 8 = 16

(a) Define state table.

(b) What is SISO ?

(c) Describe RAM and its uses.

- (d) What is I/O interface ?
- (e) Explain instruction cycle.
- (f) What is binary counter ?
- (g) Write advantages of JK flip-flop.
- (h) What is flash memory ?

UNIT – I

- 2. Define flip-flop. How is it useful and used ? Discuss clocked RS and T flip flops with diagrams and suitable examples. 8, 8
- 3. Explain the following briefly with suitable examples :
 - (a) Master-slave flip-flops and their uses. 10
 - (b) State equations, state diagram and their uses. 6

UNIT – II

- 4. What is Modulo-N counter ? How is it useful ? Explain its uses and working with examples. 8, 8

- 5. Describe the following with examples :
 - (a) Shift registers and their applications 8
 - (b) Compare SISO and PISO 8

UNIT – III

- 6. What is optical storage device ? How is it used ? Explain its types, advantages and applications with suitable examples. 16
- 7. Explain the following with examples :
 - (a) Magnetic storage devices and their merits and demerits. 8
 - (b) I/O devices and their controllers 8

UNIT – IV

- 8. (a) What is addressing ? How it is used ? Discuss its various modes and applications with examples. 10
- (b) Explain instruction format and its uses with suitable examples. 6