7. Explain the follow

(a) Magnetic Disl [8]

(b) Characteristic Memory Cell [8]

UN *I*

8. (a) What are Int ts ? How are these useful ? Wha nterrupt structure ? Illustrate. [8]

(b) What are I/O nels ? How do these work ? Illustr eir working. [8]

9. Explain the followi

(a) Instruction Fc [8]

(b) Instruction Cy [8]

Roll No. .....

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B.C.A. 2nd Semester

Examination–May, 2017

Logical Organisation of Computers

Paper-BCA-107

Time : 3 hours ***Max. 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 the examination.

Note : Attempt **five** questions in all. Question No.1 is **compulsory** and attempt **four** more questions by selecting **one** question from each unit. All questions carry equal marks.

1. Compulsory questions [8×2]

(a) What is clocked RS flip-flop ?

(b) Why Master-Slave flip-flop is called so ?

(c) What is up-down counter ?

(d) What is an Instr n Format ?

(e) What are applic: s of ROM ?

(f) What is a p m-controlled I/O technique ?

(g) What is an IOP : e its significance.

(h) What characteri lash Memory ?

UNI

2. (a) What are Excit: Tables ? How are these relevant ? v Excitation Table for RS and JK fl). [8]

(b) What are State grams ? How are these relevant i ign of Flip-flops ? Explain. [8]

3. Explain the following

(a) Master-Slave Fl p [8]

(b) T Flip-flop [8]

UNIT-II

4. (a) What are Synchronous Binary Counters ? Draw its block diagram and illustrate its operation. [8]

(b) What are the general characteristics of good shift registers ? Design a 4-bit shift register and outline the procedure for serial to parallel conversion and vice-versa. [8]

5. Explain the following:

(a) Asynchronous Sequential Circuit [8]

(b) Modulo-5 Counter [8]

UNIT-III

6. (a) What are I/O Device Controllers ? How do these work ? Illustrate their working. [8]

(b) What is Semiconductor RAM ? How do you design a RAM cell ? Illustrate. [8]