



First Year (F.Y.B.C.A.Science)
BCA-12204 Computer Organization

(Semester II)

Program: BCA
Program Specific: BCA(Sci)
Course Type: Minor
Paper: I

Credits: 2
Time: 2 Hours
Max. Marks: 30
SET: A

Instructions to the candidate:

- 1) All questions are compulsory.
- 2) Figures to the right indicate full marks.
- 3) Draw a well labelled diagram wherever necessary

Section - A

Q1) Answer all of the following

[5 X 1= 5]

1. Define the term Clock.
2. Define the term Encoder
3. What is Cache memory?
4. Define Parity.
5. What is DMA?

Section - B

Q2) Answer the following (Attempt any 5)

[5 X 2 =10]

1. What is minterm and maxterm?
2. What is NAND? Explain it with logic diagram and truth table?
3. Write a note on k-map.
4. Define the terms: Counter and Register.
5. What is Half Adder? Explain it with logic diagram.
6. What is decoder? Explain 1:2 decoders with logic diagram.
7. Write a short note on ALU.

Section - C

Q3) Answer the following/Write short notes on following (Attempt any 2)

[2 X 5= 10]

1. What is the Input/output interface? Explain functions of I/O interface.
2. What is Flip Flop? Explain working of SR flip flop with logic diagram.
3. Differentiate between Internal and external memory.
4. Perform the following binary subtraction using 2's Complement method.
 - a. $(101011)_2 - (11101)_2 = (?)_2$
 - b. $(11100)_2 - (11011)_2 = (?)_2$

Section - D

Q4) Answer the following (Attempt any 1)

[1X 5 = 5]

1. What is memory? Explain memory hierarchy with diagram.
2. What is multiplexer? Explain 4:1 Multiplexer with logic diagram and truth table.
