

FACULTY OF INFORMATICS
M.C.A. (CBCS) II - Semester (Backlog) (2019-2020 Batch) (Old) Examination,
April 2022

Subject: Computer Organization

Time: 3 Hours

Max. Marks: 70

(Missing data, if any, may be suitably assumed)

Note: Answer any five questions from the following.
All questions carry equal marks.

- 1 (a) Illustrate various logic gates.
(b) Construct a full adder circuit.
- 2 (a) Construct a 2 to 4 line decoder.
(b) Simplify the Boolean function $F(a,b,c,d)=\Sigma(3,7,11,13,14,15)$
- 3 (a) Describe basic computer instruction formats.
(b) Develop a four bit binary adder.
- 4 (a) Construct a 4 bit adder subtractor.
(b) Elucidate three state bus buffer.
- 5 (a) Write notes on assembly language.
(b) Elaborate the steps for handling program interrupt.
- 6 (a) Write assembly language program to add two numbers.
(b) Elaborate the concept of control memory.
- 7 (a) Explain arithmetic pipeline.
(b) Explain various addressing modes.
- 8 (a) Illustrate instruction formats with examples.
(b) Explain booth multiplication algorithm.
- 9 (a) Elaborate the concept of DMA.
(b) What is the significance of peripheral devices?
- 10 (a) Explain the technique of associative mapping.
(b) Describe daisy-chaining priority method.