

FACULTY OF INFORMATICS

M.C.A. (CBCS) II-Semester (Backlog) (2019-2020 Batch) (New)

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) Tabulate and explain the excess – 3 Gray codes.
(b) Explain about the interconnection structures and the uses.
2. (a) Give illustrations for floating point representation.
(b) Describe about the data transfer and its mechanism.
3. (a) Compare direct vs indirect address with illustration.
(b) Construct 4-bit adder and explain its working.
4. (a) Construct a circuit for implementing shift micro-operations.
(b) List and explain memory reference instructions.
5. (a) Give the flowchart for address sequencing.
(b) Describe different addressing modes.
6. (a) Draw and explain stack organization.
(b) Write and explain micro-program example.
7. (a) Explain the concept of memory hierarchy.
(b) Compare main and virtual memory.
8. (a) Illustrate set-associative mapping with an example.
(b) Explain about memory management hardware.
9. (a) Explain I/O interface with an example.
(b) Discuss the concept of serial communication
10. (a) Give the steps for performing DMA.
(b) Elucidate priority interrupt.