



AI -1156

B. Sc. (Part-II)
Term End Examination, 2020-21

INFORMATION TECHNOLOGY

Paper : First

Time Allowed : Three hours

Maximum Marks : 50

Note : Attempt all five questions. One question from each unit is compulsory. All questions carry equal marks.

Unit-I

1. Explain gray-code and excess 3 code with example.

Or

- (a) Minimize the Boolean expression :

$$(A + C)(AD + A\bar{D}) + AC + C$$

[2]

- (b) Minimize

$$F(A, B, C, D) =$$

$$\sum m(0, 2, 3, 5, 6, 7, 8, 10, 11, 14, 15).$$

Unit-II

2. Explain shift register with an example.

Or

What is Flip-flop? Describe the JK-flip flop in detail.

Unit-III

3. Explain the edge triggered flip-flop in detail.

Or

Write short notes on RTL and CMOS.

Unit-IV

4. What do you understand by register organisation within CPU? Write any five mostly used registers name with their working.

[3]

Or

What is DMA? Explain the working of DMA in detail.

Unit-V

5. What is the importance of Cache Memory? Explain the different types of cache memory mapping.

Or

What is the Virtual Memory? Explain the virtual memory in details.