



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 :

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

(b) Minimize

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

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

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.

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.