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NA—114—2023

FACULTY OF SCIENCE

B.Sc. (Second Semester) EXAMINATION

NOVEMBER/DECEMBER, 2023

(New Course)

ELECTRONICS

Paper-IV

(Digital Logic Circuit)

(Thursday, 21-12-2023)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

N.B. :— (1) Attempt all questions.

(2) Figures to the right indicate full marks.

1. Define multiplexer. Design 8 : 1 multiplexer with a neat circuit diagram. 15

Or

(a) What is flip-flop ? Explain the J.K. flip-flop and its working. 8

(b) Explain the D-type flip-flop. 7

2. Explain the working of 4-bit synchronous counter. 15

Or

(a) Give the characteristics of DAC. 8

(b) Explain the successive approximation ADC. 7

P.T.O.

WT

(2)

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3. Write short notes on (any *two*) :

10

- (a) Priority encoder
- (b) Race around condition
- (c) Parallel in serial out
- (d) Characteristics of ADC.