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SB—32—2022

FACULTY OF SCIENCE

B.Sc. (Sixth Semester) EXAMINATION

JUNE/JULY, 2022

(CBCS/Old Course)

PHYSICS

Paper XV

(Linear and Digital Integrated Circuits)

(Thursday, 9-6-2022)

Time : 10.00 a.m. to 12.30 p.m.

Time—2½ Hours

Maximum Marks—40

N.B. :— (i) All questions are compulsory.

(ii) Figures to the right indicate full marks.

(iii) Symbols have their usual meaning.

1. Explain Summing and Difference operational amplifiers. 15

Or

(a) Explain in detail Master-slave JK Flip-flop. 8

(b) Discuss preset and clear operations. 7

2. Discuss in detail Octal and Hexadecimal number systems. 15

Or

(a) Explain Asynchronous counter. 8

(b) Explain Ring counter. 7

3. Write short notes on any *two* (each of 5 marks) : 10

(a) Slew rate of OP-Amp

(b) Half Adder

(c) Multiplexer

(d) Serial-in Serial-out shift register.

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