

S-729

Total Pages : 3

Roll No. -----

BCA-01

Computer Fundamentals and

Introduction to Digital Logic

Bachelor of Computer Application (BCA)

1st Semester, Examination 2022(Dec.)

Time: 2 Hours

Max. Marks: 70

Note : This paper is of Seventy (70) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

Section – A

(Long Answer – type questions)

Note: Section 'A' contains Five (05) long-answer-type questions of Nineteen (19) marks each. Learners are required to answer any two (02) questions only.

[2 x 19 = 38]

P.T.O.

- Q.1. Discuss Universal Gates? Create NAND Gate using NOR Gates only. Create NOR Gate using NAND Gates only.
- Q.2. What is Flip Flop? Why it is used? Explain the types of Flip Flop with diagram.
- Q.3. Explain the application and characteristics of computer.
- Q.4. What is a shift register? Explain its working with diagram.
- Q.5. Draw a logic circuit for full adder and explain it with the help of a truth table.

Section – B

(Short-answer-type questions)

Note: Section 'B' contains Eight (08) short-answer-type questions of Eight (08) marks each. Learners are required to answer any Four (04) questions only.

$$[4 \times 8 = 32]$$

- Q.1. What is bus? List of the main function performed by buses in a computer system.
- Q.2. Differentiate between Analog, Digital and Hybrid computers.
- Q.3. Discuss the various types of volatile and non-volatile memories with the help of example.
- Q.4. What are input and output device. Explain with the help of example.
- Q.5. Define and describe DeMorgan's theorem.
- Q.6. What is counter? How synchronous counter different from asynchronous counter?
- Q.7. Describe the evolution of computer.
- Q.8. Differentiate between PROM and EPROM.
