



K21U 1110

Reg. No. :

Name :

**IV Semester B.Sc. Degree CBCSS (OBE) Regular Examination, April 2021
(2019 Admission Only)
General Awareness Course in Computer Science
4A13CSC : DIGITAL ELECTRONICS**

Time : 3 Hours

Max. Marks : 40

**PART – A
(Short Answer)**

Answer **all** questions.

(6×1=6)

1. What is an analog system ?
2. Give the digital waveform.
3. What is XOR gate principle ?
4. Define Octet.
5. What is a parallel adder ?
6. Give an example for a sequential circuit.

**PART – B
(Short Essay)**

Answer **any six** questions.

(6×2=12)

7. Explain Gray Code.
8. Give the truth table of OR Gate.
9. Draw XNOR Gate.
10. What is NOT Operation ?
11. Demonstrate how NAND gate used as a AND gate.
12. Give an example for a parallel counter. What is its function ?
13. What is an asynchronous counter ? Give an example.
14. What are latches ? Explain.

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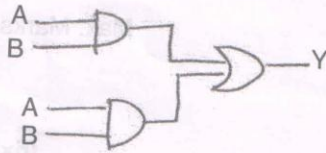


PART - C
(Essay)

Answer any four questions.

(4x3=12)

15. Convert Binary (1111) to decimal.
16. Convert decimal 6754 to octal.
17. Construct truth table for



18. Explain Encoder and Decoder.
19. What is a Full Adder ?
20. Compare synchronous and asynchronous counters.

PART - D
(Long Essay)

Answer any two questions.

(2x5=10)

21. Convert 1) Octal 1234 to Binary 2) Hexadecimal ABCD to decimal.
22. Draw circuit for
 $Y = (\bar{A} + B + C)(A + B + \bar{C})$ Use Boolean Algebra to simplify. Draw corresponding logic circuit.
23. Explain Master Slave Flip Flop.
24. Explain the different number systems.