K23U 1111

Reg. No. : .....

Name : .....

IV Semester B.Sc. Degree (CBCSS – OBE – Regular/Supplementary/ Improvement) Examination, April 2023
(2019 Admission Onwards)
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 a Digital system ?
2. List any four number systems.
3. Convert 329 to binary.
4. Which are the basic gates used in digital systems ?
5. State distributive and associative laws of algebra.
6. Write a note on XOR gate.

PART – B

(Short Essay)

Answer **any six** questions : **(6×2=12)**

7. Explain Excess 3 code.
8. Compute the binary equivalent of $(5C7)_{16}$.
9. Explain about SOP form.
10. Realize the XOR function using AOI logic.

P.T.O.

11. What are combinational circuits ? Explain.

12. Explain about full adder.

13. What is a latch ? How is it differ from a flip flop ?

14. What are shift registers ?

PART – C

(Essay)

Answer **any four** questions : **(4×3=12)**

15. Explain about BCD, GRAY code and UNICODE.

16. Briefly explain about K map.

17. Write the universal properties of NAND gates.

18. Differentiate decoders and encoders.

19. Explain the working of a SR flip flop.

20. Explain the design of a synchronous counter.

PART – D

(Long Essay)

Answer **any two** questions : **(2×5=10)**

21. What is a number system ? Explain different number systems.

22. State and prove De-Morgan's theorems.

23. Illustrate the design of multiplexers and de-multiplexers.

24. Explain the working of a Master Slave Flip Flop.

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