



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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