6215
BOARD DIPLOMA EXAMINATION
MARCH/APRIL - 2019
DIPLOMA IN APPLIED ELECTRONICS AND INSTRUMENTATION ENGINEERING
DIGITAL ELECTRONICS
THIRD SEMESTER EXAMINATION

Time: 3 Hours   **Total Marks: 80**

PART - A   (3m x 10 = 30m)

Note 1: Answer all questions and each question carries 3 marks

2: Answers should be brief and straight to the point and shall not exceed 5 simple sentences

1. Convert 306.25 octal number to into decimal

2. Represent 25 to its BCD equivalent

3. Draw the circuit diagram of half adder using NOR gates

4. Give the truth-table of one-bit digital comparator

5. Draw the diagram of asynchronous decade counter

6. Draw the diagram of JK flipflop

7. Draw the diagram of asynchronous MOD-16 counter

8. Write the truth table of universal shift register

9. List different types of ROMs

10. List the advantages of Successive Approximation methods ADC?

PART - B   (10m x 5 = 50m)

Note 1: Answer any five questions and each question carries 10 marks

2: The answers should be comprehensive and the criteria for valuation is the content but not the length of the answer

11. Implement basic gates using NOR gates only

12. a) Explain use of ASCII and EBCDIC codes   6marks
     b) State DC Morgan's theorem   4marks

13. Explain the working of full adder with diagram and truth table

14. Explain serial adder with block diagram

15. a) what is RACE-AROUND condition?   6marks
     b) List the conditions for eliminating the race around condition   4marks

16. Explain NAND latch with diagram and truth table

17. Define Read only Memory and Explain its importance

18.Explain weighted resistor method of D/A counter

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