6215

BOARD DIPLOMA EXAMINATION, (C–16)
OCT/NOV—2018

DAEI–THIRD SEMESTER EXAMINATION

DIGITAL ELECTRONICS

Time : 3 hours   [*Total Marks* : 80

PART—A   10×3=30Masks

Instructions : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed **five** simple sentences.

1. Compare weighted and un-weighted codes.

2. State De-Morgan theorems.

3. List the applications of encoders.

4. Draw the 4 bit parallel adder using full adders.

5. State the need of 'present' and 'clear' inputs.

6. raw the diagram of decade counter.

7. Draw the diagram of D flip-flop with truth table.

8. List various types of memories.

9. State the need of a register.

10. State the need of A/D converter.

PART—B

11. Reduce the expression using Boolean laws ABC + ABC + ABC + ABC + ABC + ABC + ABC and draw the gate diagrams for original and reduced expressions.

12. a) Explain the working of exclusive-Or gate with truth table.

b) State the use of alphanumeric codes in ASCII and EBCDI.

13. Explain 2's complement adder - subtracter with diagram.

14. Explain 4×1 multiplexer with truth table and list the applications.

15. Explain asynchronous ripple counter (MOD-16) with flip-flops and timing diagrams.

16. Explain master slave JK flip flop with truth table and diagram.

17. Explain the working of serial in serial out, parallel in serial out, serial in parallel out and parallel in parallel out registers with diagrams.

18. Explain D/A conversion using counter method with diagram.