

6215

BOARD DIPLOMA EXAMINATIONS

SEPTEMBER/OCTOBER - 2020

DAEI- THIRD SEMESTER

DIGITAL ELECTRONICS

Time: 3 hours

Max. Marks: 80

PART – A

3 X 10 = 30

Instructions:

1. Answer **all** questions.
2. Each question carries **Three** Marks.
3. Answer should be brief and straight to the point and should not exceed five simple sentences.

1. Compare weighed and un weighed codes.
2. State the importance of parity bit.
3. Distinguish between serial adder and parallel adder.
4. List the applications of decoder.
5. Define counter.
6. State the race around condition.
7. Define sequential logic circuit.
8. Mention the types of memories.
9. Define the terms setting time and accuracy.
10. State the need for a register.

*

PART – B

5 X 10 = 50

- Instructions:**
1. Answer any **Five** questions
 2. Each question carries **TEN** Marks.
 3. Answer should be comprehensive and Criteria for Valuation is the content but not the length of the answer.

11. Explain the working of NAND and NOR gates with the help of truth table. 5+5M
12. Explain 2's compliment parallel adder/ subtracter circuit. 4+6M
13. Perform 2's compliment method of subtraction.
a)1100-1000 b)1000-1101 5+5M
14. a) State the function of a full adder. 4M
b) Show that two half adders and OR gate constitute a full adder. 6M
15. Explain the operation of an asynchronous decade ripple counter (MOD 10) with the help of flip flops and logic gates.
16. Explain about the D-flip flop with circuit and truth table.
17. Explain the working of universal shift register circuit.
18. Explain about A/D conversion using successive approximate method.

A.A.N.M.&V.V.R.POLYTECHNIC, GUDLAVALLURU, KRISHNA

*