622

Register No.:

November 2022

Time – Three hours
(Maximum Marks: 100)

[N.B. 1. Answer all questions under Part-A each question carries 3 marks.
2. Answer all the questions either (A) or (B) in Part-B each question carries 14 marks.]

PART – A

1. Define frequency.
2. Write the function of OFF-line UPS.
3. Define current ratio of a transformer.
4. Define servo mechanism.
5. Draw the PN junction diode symbol with its forward characteristics.
6. Define rectifier and its needs.
7. Convert the 9087 decimal number into an octal number.
8. Construct NAND gate using NOR gate.
9. Define triggering.
10. State any three applications of counters.

[Turn over.....

PART – B

11. (a) Explain phase, phase angle and phase difference.

(Or)

(b) Explain in detail about the indications of fully charged cell.

12. (a) Explain the construction and working principle of transformer with neat sketch.

(Or)

(b) Describe about DC servo motor with neat sketch.

13. (a) With the diagram explain the forward and reverse characteristics of PN junction diode.

(Or)

(b) With the diagram explain the operation of Bridge rectifier.

14. (a) Explain the common base configuration of transistor.

(Or)

(b) Construct AND, OR, NOT, NOR and XOR gates using NAND gate.

15. (a) Explain about shift register with a block diagram.

(Or)

(b) Explain the difference between synchronous and asynchronous counter.
