825

Register No.: [   ]

April 2018

<u>Time – Three hours</u>
(Maximum Marks: 75)

[N.B: (1) Q.No. 8 in PART – A and Q.No. 16 in PART – B are compulsory.
Answer any FOUR questions from the remaining in each PART – A
and PART – B

(2) Answer division (a) or division (b) of each question in PART – C.

(3) Each question carries 2 marks in PART – A, 3 marks in Part – B
and 10 marks in PART – C.]

PART – A

1. Define drift current and diffusion current.

2. State the merits of fixed bias.

3. What are the applications of FET?

4. What are the different regions in the characteristics of UJT?

5. Define holding current.

6. What are the applications of MOSFET?

7. What is a solar cell?

8. Draw the symbol and characteristics curve of LDR.

PART – B

9. Write any three properties of PN junction diode.

10. Draw the characteristics curve of zener diode and explain.

11. Compare CB, CE and CC configuration.

12. Classify the FETs.

13. Draw the circuit diagram of a Colpitt's oscillator.

14. Compare a transistor with SCR.

15. What are the applications of SCR?

16. Compare LCD and LED.

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PART – C

17. (a) Explain the forward and reverse bias characteristics of PN junction diode.

(Or)

(b) Describe the working of a capacitor filter in detail with waveforms.

18. (a) Explain CE configuration with input, output characteristics.

(Or)

(b) Draw the circuit diagram of a RC coupled amplifier and explain. Draw the frequency response of it.

19. (a) Explain the characteristics of JFET.

(Or)

(b) Draw the circuit diagram of an UJT relaxation oscillator and explain.

20. (a) Explain the working of a DIAC in detail with diagrams.

(Or)

(b) Draw the biasing for n-channel D-MOSFET. Explain the drain and transfer characteristics.

21. (a) Draw the circuits, waveforms of negative clipper and positive clipper.

(Or)

(b) Explain a monostable multivibrator circuit with waveforms.