FACULTY OF SCIENCE
PHYSICS/APPLIED ELECTRONICS
Paper – V (Electronics – I)

Time: 3 Hours] [Max. Marks: 80

PART – A

Answer all the questions. (8x4=32 Marks)

1. What is TRIAC? Discuss its characteristics.
2. Explain the working of a switch mode power supply.
3. What do you understand by transistor biasing? What is its need?
4. What is negative feedback? Write the advantages of negative feedback.
5. Explain the principle of a phase shift oscillator.
6. Write the differences between astable and bistable multivibrators.
7. What is modulation? Why is modulation necessary in communication system?
8. What do you understand by frequency modulation? Explain its advantages over amplitude modulation.

PART – B

Answer all the questions: (4x12=48 Marks)

9. a) Explain the characteristics of Tunnel diode and Photo diode.
   OR
   b) What is regulation? Explain the basic principle and working of a Zener regulator.

(This paper contains 2 pages)
10. Explain the frequency response of a single stage RC coupled amplifier.
    OR
    Describe the action of an emitter follower with a neat diagram and write its characteristics.

11. Explain the action of Wein bridge oscillator. Write its advantages and disadvantages.
    OR
    With a neat diagram explain the working of collector coupled astable multivibrator.

12. Explain the principle of amplitude modulation and give the analysis of an AM signal.
    OR
    Explain with a neat diagram the working of a FM discriminator.