



FACULTY OF SCIENCE
M.Sc. I Semester Examination, Nov./Dec. 2012
PHYSICS/APPLIED ELECTRONICS
Paper – V (Electronics – I)

Time: 3 Hours]

[Max. Marks: 80

PART – A

Answer **all** the questions.**(8×4=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 :**(4×12=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.



10. Explain the frequency response of a single stage RC coupled amplifier.

OR

Describe the action of a emitter follower with a neat diagram and write its characteristics.

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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.