

**AE-754**

M.Sc. (Final)

Term End Examination, 2016-17

# PHYSICS

Special Paper : Group-A

### Paper - III

# Electronics-I

*Time : Three Hours]      [Maximum Marks : 100*  
*[Minimum Pass Marks : 36*

**Note** : Answer any **five** questions. All questions carry equal marks.

1. Explain in detail the representation of periodic signal using Fourier series.
2. State and prove Convolution theorem.
3. What is Delta Modulation ? Explain the working of DM transmitter and receiver with diagram.

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4. Explain, in detail, probability error in ASK and probability error in FSK.
  5. Explain the following terms :
    - (a) Thermal noise
    - (b) Partition noise
    - (c) Flicker noise
    - (d) Avalanche noise
  6. Describe PAM in detail.
  7. What is FET noise ? Describe the measurement of noise temperature.
  8. Explain Parseval's theorem for energy signal and Parseval power theorem in detail.
  9. Explain PTM and generation of PTM in detail.
  10. Explain, in detail, FSK with the help of suitable sketches.
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