RAMAKRISHNA MISSION VIDYAMANDIRA
(Residential Autonomous College affiliated to University of Calcutta)

FIRST YEAR [2016-19]
B.A./B.Sc. FIRST SEMESTER (July – December) 2016
Mid-Semester Examination, September 2016

Date : 17/09/2016
Time : 12 noon – 1 pm

ELECTRONICS (General)
Paper : I

Full Marks : 25

1. Define Conductor, Semiconductor, and Insulator with examples. [6]

2. State and explain the V-I Characteristics of a PN Junction Diode. [3+6]

3. Answer **any one** question : [10]
   a) A Half Wave Rectifier uses a junction Diode of Forward resistance 2 ohm, a transformer of secondary winding resistance 4 ohm and a load resistance of 100 ohm. If the transformer primary to secondary ratio is 20:1 and 220 V, 50 Hz ac is applied to the primary find —
      i)   The dc lad current
      ii) The dc voltage across the load
      iii) The ripple factor
      iv) The rectification efficiency
      v)   The TUF
      vi) The PIV of the Diode
   b) Draw and explain the working Principle of a Zener Diode. [10]

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