

RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College under University of Calcutta)

SECOND YEAR

B.A./B.SC. FOURTH SEMESTER (January – June), 2012

Mid-Semester Examination, March 2012

Date : 20/03/2012

ELECTRONICS (General)

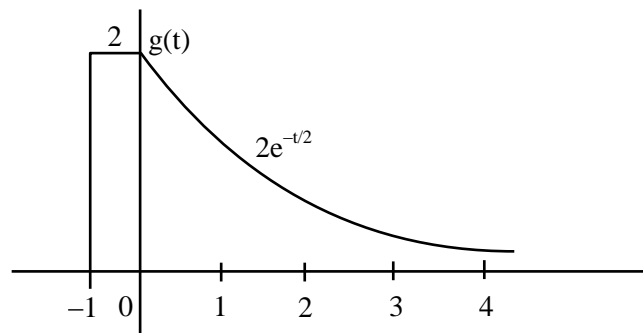
Time : 2 pm – 3 pm

Paper : IV

Full Marks : 25

Answer any two questions :

1. a) Define power and energy signal. [4]
b) What are the needs of modulation in communication? [3½]
c) What is the purpose of sawtooth voltage in CRO? [3]
d) What is the origin of short noise? [2]
2. a) What is amplitude modulation? Derive such a expression that represents an AM wave. [2+2½]
b) What is modulation index of AM? [2]
c) Calculate the energy of the following wave function $g(t)$. [6]



3. a) What is frequency modulation? Illustrate with mathematical expression. [2+2½]
b) What is depth of modulation of FM? [2]
c) Draw the block diagram of CRO mentioning its different components. [6]

