

# RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College under University of Calcutta)

SECOND YEAR

B.A./B.Sc. FOURTH SEMESTER (January – June) 2015

Mid-Semester Examination, March 2015

Date : 19/03/2015

**ELECTRONICS (General)**

Time : 12 noon – 1 pm

Paper : IV

Full Marks : 25

**Answer any one question :**

[1×10]

1. a) The RMS Value of aerial current is 10A and 12A before and after modulation. Calculate % modulation employed. [5]  
b) A transmitter supplies 10 KW power to an aerial, when unmodulated. Determine the power radiated when modulated to 30%. [5]
2. A 100V, 100 KHz carrier is modulated with the help of a 10V, 1 KHz signal to the extent of 50%. Write down the equation of AM wave. [10]

**Answer any one question :**

[1×10]

3. Derive the equation of AM wave with a proper Sketch of output wave.
4. Draw and explain the working principle of AM Diode Detector. Mention the range of time constant RC.

**Answer any two questions :**

[2×2.5]

5. Compare DSBSC and SSB
6. Compare Periodic and Nonperiodic Signal
7. TRF Receiver and Superhetrodyne Receiver

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