DG-3185
Third Year B. Sc. (Sem. V) Examination
March/April – 2016
Electronics : Paper - VII
(Analog Communication)

Time : 2 Hours] [Total Marks : 50

Instructions :
(1) Fill up strictly the details of signs on your answer book.

(2) Figures on the right indicates full marks.
(3) All symbols and abbreviations have their usual meaning.
(4) Non-programmable calculators are allowed.
(5) Q.1 is compulsory.
(6) Assume data if necessary.

I Answer in short (4 X 2) 08
a Define FM
b Explain uses of AM and FM
c Define “Antenna gain”
d Define “Signal to Noise Ratio”

II a Explain various types of External noise in brief 08
b Explain term 1. Antenna Resistance 2 Transit time noise 06
OR

II a Explain Troposphere Scattering in detail 07
b Explain fundamental of Transmission line 07

III a Prove \[ E_{cmax} + E_{cmin} \]
\[ m_a = \frac{E_{cmax}}{E_{cmin}} \]
f or AM

b What is detection? 03
C Calculate the radiation resistance of a \( \lambda/16 \) wire dipole in free space. Also find the antenna efficiency if the loss resistance is 1.05\( \Omega \) 03

OR
III a. Explain the Filter method for suppression the unwanted side band 07
b. Explain the working of Ratio detector in detail 07

IV Write short note on any two:-(7 X 2) 14

(a) Principle of an Antenna
(b) Losses in transmission line
(c) Phase Modulation
(d) Single side band system