

B.TECH SEM – VI (2007 COURSE) (BIOMEDICAL ENGG.) :
SUMMER - 2018

SUBJECT: PRINCIPLES OF TELECOMMUNICATION

day : **Friday**
Date : **01/06/2018**

S-2018-2738

Time : **02.30 PM TO 05.30 PM**
Max. Marks: 80

N.B.:

- 1) **Q.No. 1 and Q.No.5 are COMPULSORY.** Out of the remaining questions attempt **ANY TWO** questions from each section
- 2) Answers to both the sections should be written in **SEPARATE** answer books.
- 3) Figures to the right indicate **FULL** marks.
- 4) Assume suitable data if necessary.

SECTION – I

- Q.1** a) Elaborate the concept of Telemedicine in healthcare. (05)
b) Give significance of use of internet resources for telemedicine. (05)
c) What are the advantages and disadvantages of AM and FM. (04)
- Q.2** a) Describe implantable telemetry system for blood pressure and blood flow. (07)
b) Describe multichannel wireless Telemetry system for ECG and respiration. (06)
- Q.3** a) With neat block diagram explain the principle of telemedicine using mobile satellite communication. (07)
b) Describe telemedicine technology for transmission of medical images and videos. (06)
- Q.4** a) Explain single sideband suppressed carrier (SSB) with block diagram. (07)
b) Derive equation of power transmitted in AM wave. (06)

SECTION – II

- Q.5** a) State sampling theorem. Explain natural sampling with circuit diagram. (05)
b) How does PSK modulation work? (05)
c) Compare FDMA and CDMA. (04)
- Q.6** a) How drawbacks of delta modulation are overcome by Adaptive delta modulation? (07)
b) Describe PWM wave modulation with waveforms. (06)
- Q.7** a) Explain the block diagram of MODEM. Also give its standards. (07)
b) Write a note on Public Switched Telephone Network. (06)
- Q.8** a) Discuss the applications of Fiber optic communication. (07)
b) Describe types of satellite based on orbit. (06)

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