



B.TECH.

THEORY EXAMINATION (SEM-VIII) 2016-17
MICROWAVE ENGINEERING & MEASUREMENT

Time : 3 Hours

Max. Marks : 100

Note : Be precise in your answer. In case of numerical problem assume data wherever not provided.

SECTION – A

1. Explain the following:

10 x 2 = 20

- (a) What is look angle?
- (b) What is uplink design in satellite.
- (c) Define G/T ratio for satellite.
- (d) Define cloud effect in satellite link.
- (e) Define term absorption in satellite communication.
- (f) What is S/N ratios for FM video transmission.
- (g) What is error control coding?
- (h) Define attenuation in satellite link.
- (i) What are the multiplexing technique in satellite link.
- (j) What are the different type of satellite system.

SECTION – B

2. Attempt any five parts of the following questions:

5 x 10 = 50

- (a) What is VSAT. Explain the different implementation method of VSAT.
- (b) What are different LEO and Non-geostationary orbits used. Explain each of them in detail.
- (c) Explain the orbital mechanism for satellite communication.
- (d) What is basic transmission theory. Hence calculate the system temperature, C/N and G/T ratio.
- (e) How a satellite is launched? Hence explain the launching mechanism.
- (f) What are the various interferences that may effect the satellite link performance?
- (g) Explain in brief.
- (h) Describe the error detection and correction mechanism in satellite link.
- (i) Explain the principle of GPS position location. What are different GPS codes, discuss them.

SECTION – C

Attempt any two parts of the following questions:

2 x 15 = 30

- 3 Explain the different multiple access mechanism like FDMA, TDMA, CDMA.
- 4 Describe the pre emphasis and de emphasis circuit in satellite link
- 5 Explain cyclic block codes and linear block codes.

