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Question Paper Code: 39417

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Seventh Semester

Electronics and Communication Engineering

01UEC917 - SATELLITE COMMUNICATION PRINCIPLES AND APPLICATIONS

(Regulation 2013)

Duration: 1.15 hrs

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. The equatorial plane is tilted at angle of _____ to the elliptical plane.
(a) 18° (b) 23.4° (c) 24.3° (d) 25.3°
2. Elevation is measured
(a) Upward from local horizontal
(b) North eastward to the projection of the satellite path
(c) North westward to the projection of the satellite path
(d) South eastward to the projection of the satellite path
3. Transponders are
(a) Power systems used in satellites (b) Used to stabilize the satellite
(c) Launch vehicles for satellites (d) Receiver transmitter units
4. Telemetry means
(a) Measuring using Instruments (b) Measurement at a distance
(c) Shift in attitude of satellite (d) Stabilizing the satellite from distance

5. A fundamental difference between analog and digital signals is that we can improve the bit error rate of a digital signal by the use of
- (a) Stop and wait ARQ system (b) Go back ARQ system
(c) Error correction technique (d) Select and repeat ARQ system
6. What is ratio of bit rate IF bandwidth?
- (a) $R_b/BH = m/(1+p)$ (b) $R_b/BH = m^2/(1+p)$
(c) $R_b/BH = m/(1+p)^2$ (d) None of these
7. The frequencies for direct broadcast satellites vary from region to region throughout the world, although these are generally in the
- (a) Ku band (b) Ka band (c) C-band (d) None of these
8. The alphabets used in colour TV signals are
- (a) Y,T and V (b) Y,I and Q (c) Y,A and M (d) Y,C and R
9. The following parameter is considered for evaluating performance of internet system
- (a)Users (b) Bit Error Rate (c) Security (d) Mobility
10. The CATV system employs a single _____, with separate feeds available for each sense of polarization.
- (a) Outdoor unit (b) Indoor unit (c) TV unit (d) None of these

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Describe the terms of Earth orbiting satellites. (8)
12. Describe the various modes of interference that can occur in a satellite communication system. (8)
13. Illustrate the features of various multiple access schemes deployed for satellite access and compare it. (8)
14. Explain in detail about of the master antenna TV system with neat diagram. (8)
15. Describe about VSAT system. (8)