A

00000EE401121802

Pages: 2

Reg No.:_____ Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Seventh Semester B.Tech Degree Examination (Regular and Supplementary), December 2020

Course Code: EE401
Course Name: Electronic Communication

Max. Marks: 100 Duration: 3 Hours

PART A

Answer all questions, each carries 5 marks. Marks

1 How DSB-FC wave is generated using diode nonlinearity? (5)

2 Explain the working of AGC circuit. (5)

3 With relevant sketch explain the principle of operation of any one of the camera tube. (5)

4 Explain the sampling theorem used in pulse modulation. (5)

5 Highlight the role of FDMA in satellite communication. (5)

6 Explain frequency hopping referred to CDMA. (5)

7 State the basic requirements of fibre optic light sources. (5)

8 Explain cell sectoring technique. (5)

PART B

Answer any two full questions, each carries 10 marks.

9 a) With the help of neat schematic, prove that the balanced modulator produces an output consisting of sidebands only. (10)

10 a) Explain with neat block diagram, the generation of SSB using phase shift method. (6)

b) Describe the frequency spectra of SSB and VSB signals. (4)

11 a) With necessary circuit and phasor diagrams, explain the working of Foster Seeley discriminator. (10)

PART C

Answer any two full questions, each carries 10 marks.

12 a) Explain the operation of a typical cable TV system with a neat sketch. (6)

b) In a television the Picture and Sound modulations are distinct. Explain. (4)

13 a) Differentiate between Luminance and chrominance signal in a colour television. (5)

b) Draw and explain the schematic diagram of a wireless CCTV configuration. How does it differ from wired CCTV system? (5)

14 a) Explain the schematic for PPM generation process. (6)

b) Distinguish between ideal, natural and Flat top sampling. (4)

PART D

Answer any two full questions, each carries 10 marks.

15 a) Explain the block diagram of a satellite repeater. (5)

b) Explain SDMA referred to satellite communication. (5)

16 a) Explain the steps involved in call processing in cellular communication for: i) mobile to mobile, ii) mobile to wire line. (6)

b) Give the difference between co-channel interference and adjacent channel interference. (4)

17 a) Write notes on ZigBee architecture. (5)

b) With a schematic explain the principle of WiMax system. (5)

****