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Pages: 2

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
Seventh Semester B.Tech Degree Supplementary Examination August 2021



Course Code: EE401
Course Name: ELECTRONIC COMMUNICATION

Max. Marks: 100

Duration: 3 Hours

PART A

Answer all questions, each carries 5 marks.

Marks

1. Explain how DSB-SC waveform is generated from a typical AM wave. (5)
2. Draw and explain the AGC circuit used in an AM receiver. (5)
3. Draw and explain the block diagram of cable television. (5)
4. Explain the need of sampling needed in digital communication system. (5)
5. Compare FDMA, TDMA and CDMA. (5)
6. Draw and explain the block diagram of earth station. (5)
7. What are the 3 segments of GPS system? (5)
8. Explain the architecture of Wi-Fi based communication system. (5)

PART B

Answer any two full questions, each carries 10 marks.

9. a) Define modulation. Explain why modulation is necessary. (5)
b) Derive the relation between the output power of an AM transmitter and the depth of modulation. (5)
10. a) Compare and contrast between SSB and VSB. (5)
b) With necessary block diagram, explain the working of Armstrong frequency modulation system. (5)
11. a) Explain the Balanced slope detector. (4)
b) With necessary diagrams explain the working of Foster - Seeley FM demodulator. (6)

PART C

Answer any two full questions, each carries 10 marks.

12. a) Explain the operation of a colour television transmitter and receiver with block diagrams. (10)

13. a) Draw and explain the principle of any one camera tube. (5)
b) With schematic, explain the concept of pulse position modulation (5)
14. a) Explain the process involved in pulse code modulation (PCM). (10)

PART D

Answer any two full questions, each carries 10 marks.

15. a) Explain SPADE DAMA satellite system with block diagram. (10)
16. a) With block diagram, explain the working of an optical fibre communication system. (5)
b) Explain the Bluetooth based communication systems with applications. (5)
17. a) Explain different techniques to improve the capacity in cellular system. (10)
