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Reg No.:_____ Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

SEVENTH SEMESTER B.TECH DEGREE EXAMINATION, DECEMBER 2018

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 the advantages of FM over AM.	(5)
2	What are the factors to be considered in selecting Intermediate Frequency?	(5)
3	Explain the features of interlaced scanning.	(5)
4	Illustrate PWM and state the merits and demerits.	(5)
5	Give comparison between TDMA and FDMA	(5)
6	Explain CDMA referred to satellite communication.	(5)
7	Explain the major components in a fibre optic communication link with the help of block diagram.	(5)
8	Explain the concept of frequency reuse.	(5)

PART B

Answer any two full questions, each carries 10 marks.

9	a)	Calculate the percentage power saving for the SSB signal if the AM wave is modulated to a depth of (a) 100% and (b) 50%	(4)
	b)	With the help of block diagram, explain filter method for the generation of SSB AM.	(6)
10	a)	Describe the frequency spectra of SSB and VSB signals.	(4)
	b)	With neat circuit diagram, explain the operation of Balanced slope detector	(6)
11	a)	Draw the block diagram of a super heterodyne AM receiver. Describe its operation stating the primary functions of each stage.	(10)

PART C

Answer any two full questions, each carries 10 marks.

12	a)	Draw the block diagram of a pulsed radar system. Explain the functions of each block.	(5)
	b)	Explain with the help of a neat sketch, the working of a TV picture tube.	(5)
13	a)	Calculate the maximum range of a radar system which operates at 3cm,with a peak pulse power of 500 kW,if its minimum receivable power is 10^{-13}W,the	(4)

capture area of its antenna is $5m^2$ and the radar cross sectional area of target is $20m^2$.

b) Explain the schematic for PAM generation process using flat top sampling. (6)

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

b) Explain the principles of differential PCM system? (4)

PART D

Answer any two full questions, each carries 10 marks.

15 a) Explain the block diagram of an earth station used for satellite communication. (6)

b) What are the advantages of optical fibre communication? (4)

16 a) Explain any two detectors used in optical fibre communication. (6)

b) Explain the networking capability of Zig-Bee? (4)

17 a) Identify any three features of Bluetooth and explain how does it benefit for wireless applications? (5)

b) Explain cell splitting technique. (5)

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