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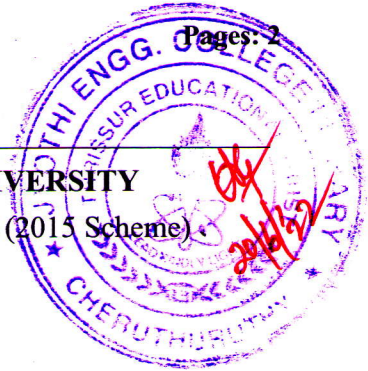
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Reg No.: _____

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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
Eighth Semester B.Tech Degree Examination June 2022 (2015 Scheme)



Course Code: EC404

Course Name: ADVANCED COMMUNICATION SYSTEMS

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any two full questions, each carries 15 marks.

Marks

- 1 a) Describe a reconfigurable base band microwave repeater station with a neat block diagram. (10)
- b) What are the advantages and disadvantages of microwave radio communication? (5)
- 2 a) Explain the block diagram of digital video broadcasting (DVB) - S system. (10)
- b) Distinguish between LCD and LED displays. (5)
- 3 a) Define Free space path loss. Explain any four diversity schemes employed, for improving the performance of radio wave propagation. (9)
- b) Explain with block diagram the MPEG2 compression standard. (6)

PART B

Answer any two full questions, each carries 15 marks.

- 4 a) With the help of a neat block diagram explain the working of a satellite transponder. (10)
- b) Give the comparison of any five characteristics of orbits LEO, MEO and GEO. (5)
- 5 a) List the main features of Bluetooth technology. (5)
- b) Describe the architecture of Wireless Local Loop system. (5)
- c) Write short note on WIMAX technology. (5)
- 6 a) With block diagram, explain the operation of (1) GPS (2) VSAT. (8)
- b) Distinguish between WLAN and WPAN. (7)

PART C

Answer any two full questions, each carries 20 marks.

- 7 a) Explain various techniques to improve the capacity of cellular systems. (10)
- b) What are the different types of channel assignment strategies used in cellular communication system? (5)
- c) Define 'Handoff'. With the help of diagram explain handoff mechanism in cellular communication. (5)

- 8 a) Explain GSM architecture in detail. (10)
b) Give the advantages and disadvantages of TDMA and FDMA technologies. (5)
c) Write a short note on MIMO system model. (5)
- 9 a) Derive the time difference, phase difference and path difference between two rays in ground reflection (two ray) model. (10)
b) List any five advantages offered by OFDM technique. (5)
c) Describe Enhanced Data rate for Global Evolution (EDGE) technology. (5)
