

4738

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL-2019

DECE - SIXTH SEMESTER EXAMINATION

MOBILE COMMUNICATION

Time: 3 Hours]

[Max. Marks : 80

PART - A

3x10=30M

- Instructions:** 1) Answer **all** questions. Each question carries **three** marks.
- 2) Answers should be brief and straight to the point and shall not exceed five simple sentences.

- 1) List the limitations of conventional mobile phone system.
- 2) Define uplink and downlink channels in mobile communication.
- 3) State the relation between capacity and cluster size in a cellular system.
- 4) Define Hand-off in Mobile communication.
- * 5) Draw the TDMA frame structure.
- 6) List the features and advantages of CDMA.
- 7) What are the drawbacks of analog cellular system?
- 8) Compare AMPS and GSM.
- 9) List the features of GPRS.
- 10) List the basic concepts of 4G aspects.

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PART - B

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5x10=50M

- Instructions:** 1) Answer any **five** questions.
2) Each question carries **ten** marks.
3) The answer should be comprehensive and the criterion for valuation is the Content but not the length of the answer.

- 11) (a) Explain the process of call progress in a cellular telephone system. (7M)
(b) State the concept of Roaming. (3M)
- 12) (a) Explain the concept of frequency reuse in cellular system. (5M)
(b) Explain cell splitting concept. (5M)
- 13) (a) Explain capacity of cellular system. (5M)
(b) Determine the number of channels per cluster and the total channel capacity of a cellular telephone area comprised of 10 clusters with seven cells in each cluster and 10 channels in each cell. (5M)
- 14) (a) Explain Code Division Multiple Access technique. (6M)
(b) Compare TDMA and CDMA. (4M)
- 15) Draw and explain the Frequency Hopped Spread Spectrum (FHSS) multiple access technique. (10M)
- 16) Explain GSM architecture with block diagram. (10M)
- 17) (a) Explain the radio interface of AMPS. (6M)
(b) State the features of Narrowband AMPS. (4M)
- 18) Explain the architecture of DECT and list the applications. (10M)

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