TCS-811

B. TECH. (CSE) (EIGHTH SEMESTER) MID SEMESTER EXAMINATION, 2018

MOBILE COMPUTING

Time: 1:30 Hours

Maximum Marks: 50

Note:(i) This question paper contains two Sections.

(ii) Both Sections are compulsory.

Section A

- 1. Choose the correct answer: $(1 \times 5 = 5 \text{ Marks})$
 - (a) The process of transferring a mobile station from one base station to another is:
 - (i) MSC
 - (ii) Roamer
 - (iii) Hand off
 - (iv) Forward channel
 - (b) The 2G cellular network uses:
 - (i) TDMA/FDD
 - (ii) CDMA/FDD
 - (iii) Digital modulation formats
 - (iv) All of the above

TCS-811

- (c) The interference between the neighbouring base stations is avoided by:
 - (i) Assigning different group of channels
 - (ii) Using transmitters with different power level
 - (iii) Using different antennas
 - (iv) All of the above
- (d) The shape of the cellular region maximum radio coverage is:
 - (i) Circular
 - (ii) Square
 - (iii) Oval
 - (iv) Hexagon
- OPA (e) The advantages of using frequency reuse is:
 - (i) Increased capacity
 - (ii) Limited spectrum is required
 - (iii) Same spectrum may be allocated to other network
 - (iv) All of the above
- $(3\times5=15 \text{ Marks})$ 2. Attempt any five parts:
 - (a) Discuss the various MAC issues.
 - (b) Explain the concept of HLR and VLR.

- (c) Describe the concept of Cell.
- (d) What is CDMA? Discuss.
- (e) What is TORA?
- (f) Discuss the GSR Protocol.

Section—B

(3)

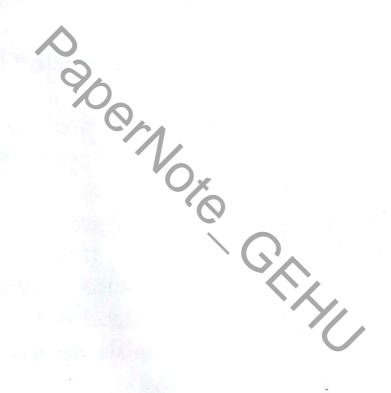
- 3. Attempt any two parts of choice from (a), (b) and (c). $(5\times2=10 \text{ Marks})$
 - (a) Which types of different services does GSM offer? Give some examples and reasons why these services have been separated.
 - (b) What are the Logical Channels? Explain each of them.
 - (c) Name the main elements of the GSM system architecture and describe their functions.
- 4. Attempt any two parts of choice from (a), (b) (5×2=10 Marks)
 - (a) Explain the AODV Protocol in detail.
 - (b) Discuss the DSDV Protocol with example.
 - (c) What is GPRS? Explain the working of GPRS.
- 5. Attempt any two parts of choice from (a), (b) and (c). (5×2=10 Marks)
 - (a) How is localization, location update, roaming etc. done is GSM and reflected in the database? What are various typical roaming scenarios?

P. T. O.

F. No.: a-20

F. No. : a-20

- (b) Differentiate between FHSS and DSSS.
- (c) Explain the term interference in the space, time, frequency and code domain. What are countermeasures in SDMA, TDMA, FDMA and CDMA systems?



TCS-811

90