

Enrollment No: _____

Exam Seat No: _____

C.U.SHAH UNIVERSITY

Summer Examination-2017

Subject Name: Wireless Communication

Subject Code: 4TE06WCM1

Branch: B.Tech (EC)

Semester: 6

Date: 19/04/2017

Time: 02:30 To 05:30

Marks: 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
 - (2) Instructions written on main answer book are strictly to be obeyed.
 - (3) Draw neat diagrams and figures (if necessary) at right places.
 - (4) Assume suitable data if needed.
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- Q-1** **Define Following Terms** **(14)**
- a) Reverse channel.
 - b) Mobile switching center.
 - c) Subscriber.
 - d) Full duplex systems.
 - e) GoS.
 - f) Control Channel.
 - g) Hand-off.
 - h) Intersystem handoff.
 - i) HLR.
 - j) Cell.
 - k) Page.
 - l) Simplex systems.
 - m) Dwell time.
 - n) SIM.

Attempt any four questions from Q-2 to Q-8

- Q-2** **Attempt all questions** **(14)**
- (a) Explain Hand-off strategy in detail.
 - (b) Explain in detail with timing diagram for call established by the mobile user to landline subscriber.
- Q-3** **Attempt all questions** **(14)**
- (a) Write short note on evolution for 2Gcellular networks.
 - (b) Write a short note on 3G CDMA 2000.
- Q-4** **Attempt all questions** **(14)**
- (a) Compare Mobile Communication and Wireless Communication. Are Both technologies same? Justify your answer.
 - (b) Explain in detail with diagram Cell Splitting technique.



- Q-5** **Attempt all questions** (14)
- (a) Compare TDMA and FDMA.
 - (b) Consider a transmitter which radiates a sinusoidal carrier frequency of 1900Mhz. For a vehicle moving 80 mph, compute the received carrier frequency if the mobile is moving: at an angle (1) $\theta = 0^0$ (2) $\theta = 180^0$ (3) $\theta = 90^0$
- Q-6** **Attempt all questions** (14)
- (a) Explain Sub-band Coding in detail.
 - (b) Explain in detail LPC vocoders with block diagram.
- Q-7** **Attempt all questions** (14)
- (a) Write a short note on GSM codec.
 - (b) Explain in detail GSM channel types.
- Q-8** **Attempt all questions** (14)
- (a) Write a short note on Packet Radio.
 - (b) Explain GSM architecture with diagram in detail.

