CBCS SCHEME

USN

15EC81

Eighth Semester B.E. Degree Examination, July/August 2021
Wireless Cellular and LTE 4G Broadband

Time: 3 hrs.   Max. Marks: 80

Note: *Answer any FIVE full questions.*

1 a. Explain briefly EPC architecuture. **(08 Marks)**
   b. Explain multiantenna technique which supports LTE. **(08 Marks)**

2 a. Explain in brief : i) Fading   ii) Sectoring. **(08 Marks)**
   b. Explain equalizers in brief. **(08 Marks)**

3 a. Explain the computational technique used in OFDM. **(08 Marks)**
   b. Mention OFDMA system design consideration. Explain in brief resource allocation in cellular system. **(08 Marks)**

4 a. Explain in brief: i) Array gain   ii) Diversity gain. **(08 Marks)**
   b. Explain 2×2 SFBC approach in open-loop transmit diversity. **(08 Marks)**

5 a. Explain the basic design principles of LTE. **(08 Marks)**
   b. Explain the structure of rate 1/3 turbo encoder. **(08 Marks)**

6 a. Explain DCI in channel encoding. **(08 Marks)**
   b. Explain multicast channels in downlink transport channel processing. **(08 Marks)**

7 a. Explain in brief : i) Frequency hopping   ii) Multiantenna transmission. **(08 Marks)**
   b. Explain non-synchronized random access procedure. **(08 Marks)**

8 a. Explain CQI feedback in brief. **(08 Marks)**
   b. Explain the cell search process in LTE. **(08 Marks)**

9 a. Explain main services and functions of RLC sublayer. **(08 Marks)**
   b. State the main functions of RRC protocol. **(08 Marks)**

10 a. Explain mobility management over X_2 interface. **(08 Marks)**
   b. Explain the basic approaches for uplink ICI mitigation. **(08 Marks)**

* * * * *