UNIVERSITY OF PETROLEUM AND ENERGY STUDIES End Semester Examination, April/May 2018

Course: Mobile Communication Protocol Program: B.Tech- CSE+ MC Time: 03 hrs. Semester: IV

Max. Marks: 100

Instructions: Attempt all the questions.

Q1 Compute the appropriate bit rate and signal level for a channel with a 1-MHz bandwidth. The SNR for this channel is 63. 4 Q2 Discuss the functionality of TRAI in brief. 4 Q3 State the differences between the "ad-hoc" and "BSS" modes of WLAN. 4 Q4 Name common control channels available in GSM with a brief description of each of them. 4 Q5 Differentiate between TDD and FDD modes of UMTS/WCDMA. 4 SECTION B Q6 Define the following terms in the context of GSM: 10 (a) Teleservices 10 10 (b) Bearer Services 10 10 Q8 Show the steps required for a handover from one foreign agent to another foreign agent in mobile IP. 10 Q9 Explain the Tight-coupling architecture for WLAN-Cellular integration with a suitable diagram. 0R Q9 Explain the Tight-coupling architecture for GSM: 10 (a) IMEI (b) IMSI 10 (c) MSISDN 10 10	S.No.		Marks	CO
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(d) MSRN (e) TMSI	Q 9	suitable diagram. OR Define following in the context of GSM: (a) IMEI (b) IMSI (c) MSISDN (d) MSRN	10	CO2, CO3, CO4

Q 9	Describe the LTE network architecture by detailing each of its components.	20	CO3
Q 10	Define the Following terms: (a) CoA (b) Triangular Routing (c) Reverse Tunneling (d) GGSN (e) TDM OR (a) Describe the user validation process in GSM network. (b) List the entities of mobile IP and describe the data transfer from a mobile node to the fixed node and vice versa.	20	CO1, CO2, CO3, CO4