

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.

SECTION A

S.No.		Marks	CO
Q 1	Compute the appropriate bit rate and signal level for a channel with a 1-MHz bandwidth. The SNR for this channel is 63.	4	CO1, CO2
Q 2	Discuss the functionality of TRAI in brief.	4	CO1, CO5
Q 3	State the differences between the “ad-hoc” and “BSS” modes of WLAN.	4	CO2, CO4
Q 4	Name common control channels available in GSM with a brief description of each of them.	4	CO2, CO3
Q 5	Differentiate between TDD and FDD modes of UMTS/WCDMA.	4	CO2, CO3

SECTION B

Q 6	Define the following terms in the context of GSM: (a) Teleservices (b) Bearer Services (c) Supplementary Services	10	CO2, CO3
Q 7	Describe the various components of OSS.	10	CO2, CO5
Q 8	Show the steps required for a handover from one foreign agent to another foreign agent in mobile IP.	10	CO3, CO4
Q 9	Explain the Tight-coupling architecture for WLAN-Cellular integration with a suitable diagram. OR Define following in the context of GSM: (a) IMEI (b) IMSI (c) MSISDN (d) MSRN (e) TMSI	10	CO2, CO3, CO4

SECTION-C

Q 9	Describe the LTE network architecture by detailing each of its components.	20	CO3
Q 10	<p>Define the Following terms:</p> <p>(a) CoA (b) Triangular Routing (c) Reverse Tunneling (d) GGSN (e) TDM</p> <p style="text-align: center;">OR</p> <p>(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.</p>	20	CO1, CO2, CO3, CO4