TED (15) – 6134

(REVISION — 2015)

Reg. No.....

Signature .....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 2018

MOBILE COMMUNICATION

[*Time* : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

I Answer *all* questions in one or two sentences. Each question carries 2 marks.

1. Name any two second generation cellular networks.
2. Define Handoff.
3. List different components of a satellite communication.
4. List any four requirements of Wireless Lan.
5. Give the application areas that are supported by Bluetooth. (5×2 = 10)

PART — B

(Maximum marks : 30)

II Answer any *five* of the following questions. Each question carries 6 marks.

1. List and define different performance metrics that may be used to make the hand off decision.
2. Describe first generation analog cellular networks.
3. Describe some key differences between satellite based and terrestrial wireless communication.
4. Explain the frequency bands for satellite communication.
5. Describe the architecture of IEEE 802.
6. Describe Wifi protected access.
7. Explain Bluetooth protocol architecture. (5×6 = 30)

Marks

PART — C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each full question carries 15 marks.)

UNIT — I

III (a) Explain the operations of cellular system with the help of a diagram. 10

(b) Write short notes on frequency reuse. 5

OR

IV (a) Explain the advantages of CDMA for cellular network and its design considerations. 8

(b) Describe different multiple access techniques. 7

UNIT — II

V (a) Discuss mobile IP and its operations with the help of a diagram. 9

(b) List the advantages of WLL over wired subscriber loop. 6

OR

VI (a) List and explain different ways of classifying satellite orbits. 9

(b) Draw the block diagram of wireless application protocol architecture. 6

UNIT — III

VII (a) List and define 802.11 services. 10

(b) Describe about Infrared LAN. 5

OR

VIII (a) List the requirements for Wireless LAN. 10

(b) Differentiate between MAC address and an LLC address. 5

UNIT — IV

IX (a) Discuss Bluetooth applications and architecture. 12

(b) Give short notes on Scatternet and Piconet. 3

OR

X (a) Discuss IEEE 802.15 architecture for Wireless Personal Area Networks. 9

(b) Write short notes on wireless sensor networks. 6