

MASTER OF SCIENCE (COMPUTER SCIENCE) (CBCS-2018 COURSE)
M.Sc. (Computer Science) Sem-III : WINTER :- 2021
SUBJECT: MOBILE TECHNOLOGIES

Day : Thursday
Date 20-01-2022

W-20055-2021

Time : 02:00 PM-05:00 PM
Max. Marks: 60

N.B.

- 1) All Questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Draw diagrams **WHEREVER** necessary.
-

- Q.1**
- a) Explain the protocol architecture for GSM in detail. (07)
 - b) Explain the transition of mobile phone from 1G to 3G. (08)

OR

- a) Explain SMS architecture in brief. (07)
 - b) Explain the wireless transaction protocol. (08)
- Q.2**
- A)** Answer **ANY ONE** of the following (08)
- i) State the necessity for specialized MAC. Explain: i) hidden and exposed terminals ii) Near and far terminals.
 - ii) Define routing? Explain the difference between wired, and adhoc wireless network.
- B)** Answer **ANY ONE** of the following: (07)
- i) Explain the following adhoc routing protocols: flat, hierarchical and geographic- position assisted.
 - ii) What are the main benefits of spread spectrum system? State the advantages of DSSS over FHSS.

- Q.3** Answer **ANY THREE** of the following: (15)
- a) Explain IP encapsulation and minimal encapsulation.
 - b) Explain the goals, assumption and requirements for mobile IP.
 - c) Explain fast-retransmit/ fast-recovery and transmission / time -out freezing for mobile TCP.
 - d) Explain mobile adhoc networks with necessary diagram.

- Q.4** Write short notes on **ANY THREE** of the following: (15)
- a) Cellular IP
 - b) Snooping TCP
 - c) UI controls
 - d) Reverse tunneling

* * * * *
