(c) Distinguish between proactive, reactive and hybrid protocol. Explain TORA and what happens if a link is broken with the help of an example?

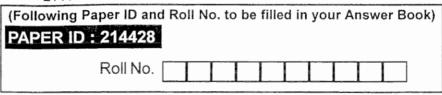
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NMCA-414



M.C.A. (Semester-IV)

## SPL. THEORY EXAMINATION, 2014-15 MOBILE COMPUTER

Time: 3 Hours]

[Total Marks: 100

Note: Attempt all questions.

- Attempt any <u>four</u> parts of the following:
  - (a) Explain the word 'mobile computing' and also give any suitable live example with merits of mobile computing.
  - (b) What is the main reason of using cellular systems? Explain dynamic channel allocation.
  - (c) Explain wireless telephony along with its major application areas.

5x4=20

- (d) What is handoff? Discuss different types of handoff.
- (e) What is GSM? Discuss its architectures.
- Discuss HLR and VLR.
- Attempt any foour parts of the following: 5x4=20 2.
  - (a) Describe all wireless local loop (WLL) schemes in detail.
  - (b) Explain the system architecture and protocol architecture of IEEE 802.11 with suitable example.
  - (c) Differentiate between Bluetooth and IEEE 802.11.
  - (d) Explain packet flow in mobile IP.
  - (e) Distinguish between DCF and PCF operation in context to WLAN.
  - Give an overview of WAP architecture and compare it with typical internet architecture when using www.
- 10x2=20 Attempt any two parts of the following: 3.

(2)

(a) Discuss major challenges related to data management in mobile computing environment.

- (b) What is the general goal of a file system? Explain CODA file system.
- (c) Why is data replication needed in mobile environment? Discuss different replication schemes used for this purpose.
- 10x2=20 Attempt any two parts of the following: 4.
  - (a) Discuss various issues related to transaction processing in mobile computing environment.
  - (b) What are mobile agents? What are the benefits/ good reasons for using mobile agents? Discuss the classification of fault tolerance schemes for mobile agents.
  - (c) Explain the different security aspects in mobile agents.
- 10×2=20 Attempt any two parts of the following: 5.
  - (a) Discuss fundamental differences between wired and Adhoc networks related to routing.
  - (b) Describe AODV routing. How it is different than standard distance vector algorithm?

[Contd...