

Seat No.	
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**B.E. (E&TC Engg) (Part - IV) (Semester - VIII) Examination,  
May - 2018**

**WIRELESS MOBILE COMMUNICATION (Revised)**

**Sub. Code : 67817**

**Day and Date : Monday, 07 - 05 - 2018**

**Total Marks : 100**

**Time : 02.30 p.m. to 05.30 p.m.**

- Instructions :**
- 1) All questions are compulsory.
  - 2) Figures to the right indicate full marks.
  - 3) Assume suitable data if necessary.

**Q1) Attempt any two [16]**

- a) Explain Free Space Propagation Model in Wireless Communication.
- b) What is fading? Discuss fading types along with its causes.
- c) Explain Global Cellular Network Interoperability.

**Q2) Attempt any two [16]**

- a) A mobile located 5km away from the BS and uses a vertical  $\lambda/4$  monopole antenna with a gain of 2.55 dB to receive cellular radio signals. The E field at 1km from transmitter is measured to be  $10^{-3}$  V/m. The carrier frequency used for the system is 900 MHz.
  - i) Find the length and the effective aperture of the receiving antenna
  - ii) Find the received power at the mobile using the Two-ray ground reflection model assuming the  $h_t = 50$  m &  $h_r = 1.5$  m above ground.
- b) Explain following terms with respect to mobile multipath channels
  - i) Coherence Bandwidth ii) Doppler Spread
- c) Draw and explain Protocol Architecture of SS7.

**Q3) Write notes on any three [18]**

- a) Signal Penetration into buildings
- b) Rayleigh's fading Distribution
- c) Common Channel Signaling
- d) ISDN

**P.T.O.**

Q4) Attempt any two.

- a) Explain personal & terminal mobility also the service portability.
- b) Give the details of direct sequence spread spectrum technique.
- c) What are the advantages & disadvantages of WLAN?

Q5) Attempt any two.

[16]

- a) Draw & explain architecture of infrastructure & Adhoc IEEE802.11 (mobile network).
- b) Explain QoS supported by WATM network.
- c) Discuss about the IP packet delivery & registration.

Q6) Write notes on any three.

[18]

- a) Snooping TCP.
- b) Dynamic host configuration protocol (DHCP).
- c) Dynamic routing in mobile adhoc network
- d) IEEE 802.11 MAC frame structure.

