

SV-464

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Seat No.	
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**B.E. (E & TC) (Part - IV) (Semester - VII)
(Old) Examination, May -2019
WIRELESS COMMUNICATION
Sub. Code : 47927**

Day and Date : Thursday, 9 - 05 - 2019

Total Marks : 100

Time : 2.30 p.m. to 5.30 p.m.

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

SECTION - I

Q1) Attempt any two from three. [16]

- a) What is Umbrella cell approach? Explain in detail.
- b) Explain free space propagation model in detail. Find Fraunhofer distance for an antenna with maximum dimension of 1m & operating frequency of 900 MHz. If antenna have unity gain, calculate path loss.
- c) Explain basic propagation mechanism in mobile radio propagation.

Q2) Attempt any two from three. [16]

- a) Explain in detail two-way ground reflection model.
- b) Explain frequency reuse principle & prove that for a hexagonal geometry, the co-channel reuse ratio is given by $Q = \sqrt{3}N$, where $N = i^2 + ij + j^2$.
- c) Compare 2G & 3G wireless networks.

Q3) Attempt any two from three. [18]

- a) Write a note on Wireless Local Loop.
- b) What do you mean by shape factor for small scale fading wireless channels.
- c) Explain small scale multipath measurements.

P.T.O.

SECTION - II

Q4) Attempt any two.

[16]

- a) Compare FDMA & TDMA.
- b) Explain SDMA in detail.
- c) Explain spread spectrum multiple access.

Q5) Attempt any two.

[16]

- a) Explain ISDN in detail.
- b) Explain traffic routing in wireless networks.
- c) Discuss development of wireless networks.

Q6) Write a note on any three.

[18]

- a) GSM.
- b) Digital European Cordless Telephone.
- c) SS7
- d) Packet Radio.

