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MAR_APR 2026 SUMMER EXAMINATION

1154 B.Tech. CBCS

Sub. Name: Wireless Communication

Sub. Code: 67817/84861/85041

Day and Date: Tuesday ,26-05-2026 **Total Marks: 70**

Time: 02:30 PM To 05:00 PM

Instructions:
1. **All questions are compulsory**
2. **Assume suitable data wherever necessary and mention it boldly**
3. **Draw neat labelled diagrams wherever necessary**
4. **Figures to the right indicate full marks**
5. **Use of Scientific calculator is allowed**

Q1) Solve following MCQ. **[14]**

i. Which method of cellular network assists in minimizing the co-channel interference associated with the angle of degree?
- A. Cell Sectoring
- B. Cell Splitting
- C. Cell Segmentation & sectoring
- D. None of the above

ii. The received power is attenuated by a factor called
- A. Path loss &Free space loss
- B. Path loss
- C. Free space loss
- D. None of the mentioned

iii. The Doppler shift for mobile moving with constant velocity, v is given by
- A. v/λ
- B. $(v*\cos\theta)/\lambda$
- C. $v*\cos\theta$
- D. $v*\lambda$

iv. For fast fading channel, the coherence time of the channel is smaller than _____ of transmitted signal
- A. Doppler spread
- B. Bandwidth
- C. Symbol period
- D. Coherence bandwidth

v. In wireless LAN, there are many hidden stations so we cannot detect the
- A. Frames
- B. Signal
- C. Collision

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D. Data

vi. Wireless data networks are not well supported by _____
A. Datagram services
B. Connection less services
C. Circuit switching
D. Routing service

vii. Which one of the following is not a WAP device?
A. PC
B. Laptop
C. PDA
D. Mobile phone

Q2) Attempt Any Two **[14]**

a. Explain method of improving coverage and capacity in cellular system. **[7]**

b. Draw & Explain two ray model. **[7]**

c. Explain flat fading and frequency selective fading **[7]**

Q3) Attempt Any Two **[14]**

a. Explain Handoff in cellular system. **[7]**

b. Explain free space propagation model. **[7]**

c. Explain doppler spread and coherence time. **[7]**

Q4) Attempt Any Two **[14]**

a. Differentiate Between Wireless and Fixed Telephone Networks. **[7]**

b. What is WML? Explain its features in detail. **[7]**

c. Explain piconet and scatternet in Bluetooth. **[7]**

Q5) Attempt Any Two **[14]**

a. Explain Wireless Datagram Protocol. **[7]**

b. Draw and explain architecture of B-ISDN. **[7]**

c. Explain MAC layer of IEEE 802.11 **[7]**

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End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -
This Question Paper may be distributed for following Subjects as common code.
सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

1] (101) Bachelor of Engineering (67817) WIRELESS MOBILE COMMUNICATION Part 4 SEM 8
2] (1154) B.Tech. CBCS (84861) Wireless Communication Part 4 SEM 8
3] (101) Bachelor of Engineering (85041) Wireless Communication Part 4 SEM 8

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