GUJARAT TECHNOLOGICAL UNIVERSITY
ME - SEMESTER–1 (NEW) EXAMINATION – WINTER 2018

Subject Code: 3712311   **Date: 04/01/2019**
Subject Name: Advanced Wireless and Mobile Networks
Time: 02:30 PM To 05:00 PM   **Total Marks: 70**

Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full mark**

Q.1	**(a)**	What is Multipath Propagation? What are its side effects?	**07**
	(b)	What is cellular system? What are its advantages and disadvantages?	**07**
Q.2	**(a)**	Which frequency band is used in GSM? How the concepts of FDM and TDM are used in GSM?	**07**
	(b)	Apply the Advanced Phase Shift Keying on 1 0 1 1 0 1 0 and draw the modulated signal.	**07**

OR

	(b)	List various logical channels. Also write about its capacity and applications.	**07**
Q.3	**(a)**	Write advantages and disadvantages of Infrared communication and Radio Communications.	**07**
	(b)	What is FHSS? Draw the format of IEEE 802.11 PHY frame format when FHSS is used. Also explain the use of each field.	**07**

OR

Q.3	**(a)**	Which medium access mechanism is used in IEEE 802.11? How the collisions are avoided?	**07**
	(b)	What do you mean by ad-hoc network? Explain the route discovery mechanism in DSDV.	**07**
Q.4	**(a)**	Explain various steps of DHCP client initialization in mobile IP.	**07**
	(b)	Why the classical TCP cannot be used in mobile environment?	**07**

OR

Q.4	**(a)**	Which are the two agent discovery mechanisms in mobile IP? Explain any one in detail.	**07**
	(b)	Write a short note on Indirect TCP.	**07**
Q.5	**(a)**	Explain the working of WEP? What are its limitations? How WEP can be improved?	**07**
	(b)	What do you mean by ISM band? Which frequency band is used in Bluetooth? What is the size of device address in Bluetooth? What is the use of L2CAP?	**07**

OR

Q.5	**(a)**	Explain the architecture of GPRS.	**07**
	(b)	What is the need of Handover in GSM? Explain with example.	**07**

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