



B.E/B.TECH DEGREE EXAMINATIONS: MAY 2023

(Regulation 2018)

Sixth Semester

COMPUTER SCIENCE AND ENGINEERING

U18CST6002: Wireless Networks And Mobile Systems

COURSE OUTCOMES

CO1:	Compare various wireless transmission and media access techniques.
CO2:	Identify and Interpret fields in GSM and GPRS frame structures.
CO3:	Analyse physical, link and network layer characteristics of wireless networks.
CO4:	Compare Mechanisms for Improving TCP Performance over Wireless Links.
CO5:	Understand 4G features and technologies

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 2 = 20 Marks)
(Answer not more than 40 words)

1.	Recall about Code division Multiple Access technique.	CO1	[K ₁]
2.	How does DAB signal work?	CO1	[K ₁]
3.	Illustrate how IEEE 802.11 solve the hidden terminal problem.	CO2	[K ₂]
4.	Outline the protocol stack involved for Bluetooth communication.	CO2	[K ₂]
5.	Why the traditional IP cannot be used in a mobile network. What are the main differences between the traditional IP and the mobile IP?	CO3	[K ₁]
6.	Compare the functionalities of a foreign agent & Home agent.	CO3	[K ₂]
7.	What are the different layers of WAP architecture?	CO4	[K ₁]
8.	Define in brief about Wireless Application Environment (WAE).	CO4	[K ₁]
9.	List the challenges faced by 4G.	CO5	[K ₁]
10.	Outline the different types of medium access protocol?	CO5	[K ₂]

Answer any FIVE Questions:-
PART B (5 x 4 = 20 Marks)
(Answer not more than 80 words)

11.	Elaborate the approaches for transporting the GPRS signalling and user data.	CO2	[K ₂]
12.	Illustrate the design goals and applications of wireless LAN.	CO1	[K ₂]

13.	Analyze the basic structure and handover scenarios of HiperLAN2 with necessary diagrams.	CO3	[K ₄]
14.	Compare and Contrast Traditional and Mobile TCP.	CO4	[K ₂]
15.	Assess the Local services offered in LTE system.	CO5	[K ₅]
16.	Illustrate the characteristics and applications of MANET.	CO5	[K ₂]

**Answer any FIVE Questions:-
PART C (5 x 12 = 60 Marks)
(Answer not more than 300 words)**

17.	a)	Interpret GSM architecture and its services in detail. Also discuss in details about the Authentication and Security in GSM architecture.	12	CO2	[K ₂]
18.	a)	Demonstrate the basic structure of an IEEE 802.11 MAC data frame and also explain the special control packets.	12	CO1	[K ₂]
19.	a)	Identify the main functions of DHCP. Explain the Client initialisation using DHCP with a neat diagram. Also State some applications of DHCP.	12	CO3	[K ₃]
20.	a)	Compare the presented protocol stacks for WAP 2.0 and give application examples.	12	CO4	[K ₂]
21.	a)	Evaluate the technologies behind the 4G services and explain in detail.	12	CO5	[K ₅]
22.	a)	Develop a system description for a tight coupling in a internetworking between WLAN and GPRS.	12	CO2	[K ₃]

Please indicate knowledge level (K₁toK₆) and Course Outcome level (CO1 to CO5) against each question for each subdivision.