RAMAIAH UNIVERSITY OF APPLIED SCIENCES

Faculty of Engineering & Technology			
Ramaiah University of Applied Sciences			
Department	Computer Science and Engineering	**Programme**	B. Tech.
Semester	5th		
Course Code	CSC303A	**Course Title**	Computer Networks
Course Leader	Dr. Rinki Sharma, Ms. Suvidha K S, Mr. Nithin Rao R		

Assignment - 2			
Register No.		Name of Student	

Sections		**Marking Scheme**	**Max Marks**	**First Examiner Marks**	**Second Examiner Marks**
Q1	1.1	Introduction to VLSM	01		
	1.2	Difference between VLSM and CIDR	02		
	1.3	Advantages of using VLSM and CIDR together in a single network	02		
		Max Marks	**05**		
Q2	2.1	Differentiate among IEEE 802.11 Wi-Fi protocols 802.11a, 802.11b, 802.11g, 802.11n, 802.11ac, and 802.11ax w.r.t data rate, bandwidth, frequency band and access techniques	10		
	2.2	Explain the different encryption techniques used in IEEE 802.11 Wi-Fi protocols.	10		
		Max Marks	**20**		
		Total Assignment Marks	**25**		

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Course Marks Tabulation				
Component- 1(B) Assignment	**First Examiner**	**Remarks**	**Second Examiner**	**Remarks**
Q 1				
Q 2				
Marks (Max 25)				

Signature of First Examiner

Signature of Second Examiner

Please note:

1. Documental evidence for all the components/parts of the assessment such as the reports, photographs, laboratory exam / tool tests are required to be attached to the assignment report in a proper order.
2. The First Examiner is required to mark the comments in RED ink and the Second Examiner's comments should be in GREEN ink.
3. If the variation between the marks awarded by the first examiner and the second examiner lies within +/- 3 marks, then the marks allotted by the first examiner is considered to be final. If the variation is more than +/- 3 marks then both the examiners should resolve the issue in consultation with the Chairman BoE.

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Assignment

Instructions to students:

1. The assignment consists of **3** questions.
2. Maximum marks is **25.**
3. The assignment has to be neatly word processed as per the prescribed format.
4. The maximum number of pages should be restricted to **9**.
5. The printed assignment must be submitted to the course leader.
6. **Submission Date: January 22nd 2021**
7. **Submission after the due date is not permitted.**
8. **IMPORTANT**: It is essential that all the sources used in preparation of the assignment must be suitably referenced in the text.
9. Marks will be awarded only to the sections and subsections clearly indicated as per the problem statement/exercise/question

Preamble

This course is intended to provide a thorough knowledge of the concepts of computer networks to students. It introduces the layered software hierarchy and the protocols that are applied at each layer. This course also touches on certain application areas of computer networks such as Local Area Networks and Mobile Ad-hoc Networks.

Question 1 **(5 Marks)**

The creation and deployment of various-sized subnets of a network ID is known as variable length sub-netting and uses Variable Length Subnet Masks (VLSM). This is different from conventional subnet creation and Classless Inter-Domain Routing (CIDR). Compare VLSM with CIDR. Emphasize the following:

1.1 Introduction to VLSM.

1.2 Difference between VLSM and CIDR.

1.3 Advantages of using VLSM and CIDR together in a single network.

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Question 2 **(20 Marks)**

Discuss the IEEE 802.11 Wireless Network standards with respect to the data rate, access techniques and their characteristics.

2.1 Differentiate among IEEE 802.11 Wi-Fi protocols 802.11a, 802.11b, 802.11g, 802.11n, 802.11ac, and 802.11ax w.r.t data rate, bandwidth, frequency band and access techniques.

2.2 Explain the different encryption techniques used in IEEE 802.11 Wi-Fi protocols.