Paper / Subject Code: 32422 / Computer Network Security

1T01235 - T.E.(Information Technology Engineering)(SEM-V)(Choice Base Credit Grading System) (R-19) (C Scheme) / 32422 - Computer Network Security QP CODE: 10025760 DATE: 25/05/2023

Time: 3 hours Max. Marks: 80 INSTRUCTIONS (1) Question 1 is compulsory. (2) Attempt any **three** from the remaining questions. (3) Draw neat diagrams wherever necessary. 5 marks each Q1 Explain Security Services and mechanisms to implement it. a) Compare HMAC and CMAC b) c) Explain different NAC enforcement methods Explain SSH protocol stack in brief d) 10 marks each $\mathbf{Q2}$ Explain Playfair cipher with example a) Describe different Block Cipher modes b) 10 marks each Q3 State firewall design principles and its types with advantages. a) Describe different types of protocol offered by SSL. b) 10 marks each Q4 What is Network access control? Discuss the elements present in this context. a) Explain Kerberos Protocol in detail. b) Q5 10 marks each Explain the working of IPsec in its different mode. a) What is Network Management Security? Explain SNMP V3. **b**) 10 marks each **Q6** Explain IDS and its types in detail. Define Malware. Explain at least five types with example.

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