B. Tech. Third Semester (Artificial Intelligence and Data Science) / 21-22_SOE_ADS_203.1 Examination

Course Code : AIDS 2203 **Course Name : Computer Networks**

Time : 3 Hours] [Max. Marks : 50

Instructions to Candidates :—

(1) Do not write anything on question paper except your exam seat number.

(2) Write the accurate question number in left margin of answer book along with answers.
(3) All questions are compulsory.
(4) All questions carry marks as indicated.
(5) Assume suitable data wherever necessary and mention at the beginning of answer.
(6) Illustrate your answers wherever necessary with the help of neat sketches.

1. (A) Explain Interfaces and Services. Also draw relation between layers at an interface. 4(CO1)

(B) Draw OSI Reference Model and Explain each layer in detail. 5(CO1)

2. (A) Classify and explain in brief all the transmission medias. 4(CO1)

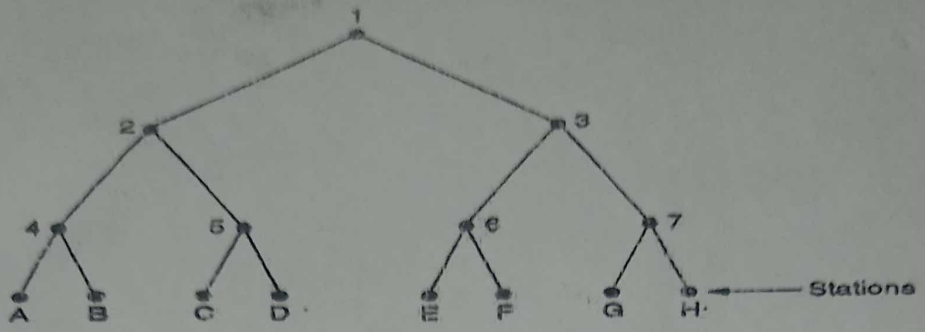
(B) Describe the transmission impairments and causes of these impairments. 4(CO1)

3. (A) Consider a data unit to be transmitted is 1010 1001 0011 1001. Use the checksum method to show calculations. If result is all zeros at receiver end, what does it indicate ? 4(CO2)

(B) Explain 1-bit sliding window protocol with suitable diagram. 4(CO3)

4. (A) Distinguish between Pure and Slotted ALOHA. 4(CO3)

(B) In the following diagram, if station G and H wants to transmit data, Calculate the number of slots required using Adaptive tree walk and Improved version of Adaptive tree walk protocol.



5(CO2)

5. (A) Discuss properties of routing algorithm. Define optimality principle. 4(CO1)

(B) Explain IPv4 header format. 4(CO2)

6. (A) Write a short note on SMTP. 4(CO2)

(B) Explain Quality of Service parameters of transport layer. 4(CO2)