JCB UNIVERSITY OF SCIENCE AND TECHNOLOGY , FARIDABAD
B.TECH (EIC 6th semester) EXAMINATION (Under CBS) Scheme 2010
Computer networks (EIC- 306) May 2019

Time : 3 Hrs.

M.Marks: 60

Note: All questions are compulsory from part 1. Attempt any 4 questions from part 2.

Part-1

Q.No. 1 (A) What is peer to peer process.

(B) Differentiate between physical & logical addressing.

(C) There is a channel having a BW of 5kHz. If data is sent at 150 kbps, then what is minimum SNR_{db}? & what is SNR.

(D) Differentiate between GEO , MEO & LEO.

(E) What is the usage of subnetting & NAT.

(F) Given the data word 100100101 & divisor 10111design a code word for corresponding data word. Use polynomial detection method.

(G) How performance of a congested network can be measured.

(H) What is minimum & maximum size of UDP header ?

(I) Why DCT is required in JPEG ?

(J) Differentiate between spatial compression & temporal compression.

$2*10=20$

Part-2

Q.No. 2   Explain TCP/IP reference model in detail. Differentiate between OSI &TCP/IP model.

10

Q.No 3 (A) What is unguided transmission media & describe its types, applications & electromagnetic spectrum used.

5

(B) Discuss circuit switching & differentiate between circuit switching & virtual circuit switching. How transmission time depends upon packet size. Explain it with example.

5

Q.No. 4 (A) What is sliding window protocol. Draw all the four possible cases of Selective repeat ARQ with its algorithm.

5

(B) Differentiate between CSMA & Aloha. Explain CSMA/CA in detail. Why in wireless network we use CSMA/CA and not CSMA/CD.

5

Q.No. 5 (A) An organization is granted a block of 16.0.0.0/8. The administrator wants to create 500 fixed length subnets.

a) Find the subnet mask.

b) Find the number of addresses in each subnet.

c) Find first & last address of subnet 1

d) Find first & last address of subnet 500

5

(B) Explain distance vector routing with an example. What is two node loop instability problem of it and how it can be rectified.

5

Q.No. 6 (A) Discuss congestion control mechanism in frame relay.

5

(B) What is the value of symmetric key in Diffie Hellman protocol if g=7, p=23, x=3 & y=7 Also explain what happen if x & y have same vale in Diffie Hellman Use an example to prove the claim.

Q.No. 7 Write short note on following
  a) MPEG
  b) TCP protocol
  c) Controlled access

5

10