Code: 9A05506

R09

B.Tech III Year II Semester (R09) Supplementary Examinations December/January 2015/2016

COMPUTER NETWORKS

(Common to CSS and ECC)

Time: 3 hours Max Marks: 70

Answer any FIVE questions

All questions carry equal marks

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1 (a) Discuss ISO/OSI reference model in detail.
(b) Briefly explain the components of a fiber optic cable with a neat sketch.

2 (a) Explain one-bit sliding window protocol. Give advantages and disadvantages of it.
(b) Given 1101011011 data frame and generator polynomial G(x) = x4 + x + 1, derive the transmitter frame.

3 (a) What is the primary difference between token bus and token ring?
(b) A large population of ALOHA users manages to generate fifty requests/sec, including both originals and retransmissions. Time is slotted in the units of 40 msec.
(i) What is the chance of success on the first attempt?
(ii) What is the probability of exactly k collisions and then a success?
(iii) What is the expected number of transmission attempts needed?

4 (a) What are the responsibilities of network layer? Explain them.
(b) Write short notes on Hierarchical routing.

5 (a) Explain with a neat sketch, the working of DHCP.
(b) What is proxy ARP? Explain it in detail.

6 (a) Discuss in brief about the services provided by the transport layer.
(b) What is addressing? Explain it in detail.

7 (a) Explain the operation of JPEG using lossy sequential mode.
(b) List the various common selection tags used in HTML. Explain them with example program.

8 (a) With the help of a neat sketch explain the encryption model.
(b) Give brief description about the substitution ciphers.

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