



T.E. Sem. V (CBS45), COMP.

Sub:- Computer Networks.

**QP Code : 3323**

(3 Hours)

Total marks : 80

Note:

- Question No. 1 is compulsory.
- Attempt any Three questions out of remaining questions.
- Make suitable assumptions whenever necessary.

Q 1:

[4 X 5]

- a) What are the design issues for the Layers ?
- b) Differentiate between Aloha and Slotted Aloha .
- c) Explain in short different framing Methods.
- d) How does the Token Bucket Algorithm works?
- e) Why does the data link protocol always put the CRC in a trailer rather than in a header ?

Q 2:

- a) Explain Sliding window Protocol using Go Back-N technique. [10]
- b) Describe the OSI Reference Model with a neat diagram. [10]

Q 3:

- a) What is the function of IP Protocol? Discuss its header format. [10]
- b) Discuss the quality of service parameters in computer network. [10]

Q 4:

- a) What is count to infinity problem in distance vector routing? Discuss in detail . [10]
- b) Explain three way handshake technique in TCP. [10]

Q 5:

- a) Explain the need for DNS and describe the protocol functioning. [10]
- b) Explain Explain CSMA Protocols. Explain how collisions are handled in CSMA/CD. [10]

Q 6: Write short notes on the following.

[5 X 4]

- a) Functions of Session Layer.
- b) Address Resolution Protocol (ARP).
- c) Berkeley Socket
- d) Differentiate between OSPF and BGP .

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(3 Hours)

[Total Marks : 80

- N.B.** (1) Question no. 1 is **compulsory**.  
(2) **Attempt** any **three** from the remaining.

1. (a) Describe why a system needs to be analyzed and what are the roles of a system analyst? 10  
(b) Discuss the various steps involved in object oriented system design with appropriate diagrams. 10
2. (a) Write a short note on : Business Process Re-engineering and its activities 10  
(b) What do you mean by SDLC? Describe the different phases of SDLC? 10
3. (a) Draw use case diagram for course registration system and write the use case specification for any two use cases 10  
(b) Write a system proposal to keep track of inventory in manufacturing unit. 10
4. (a) Draw the DFD for order entry system (up to 2 levels) and describe the procedure for its validation. 10  
(b) Draw the sequence diagram for login procedure to a system. Include all possible scenarios and draw its activity diagram also. 10
5. (a) Assume that the library management system is deployed in a client server architecture. Explain the various components and its deployment 10  
(b) Explain the relationship of all OO models with a diagram. 5  
(c) Write a short note on : Traditional Approach to Design 5
6. (a) What are fraud risks and state its prevention techniques 10  
(b) Explain the activities done during feasibility analysis. Give the structure of feasibility report. 10



Hours : 03

Marks :100

Note:

- 1) Question no. one is compulsory
- 2) Attempt any four out of the remaining six questions.
- 3) Draw the suitable diagram wherever is necessary.

- Q1: (a) Explain the layers details of OSI and TCP/IP Models. 10  
(b) With a neat diagram compare the uses and functions of different hardware Components/devices used in an inter network. 10
- Q2: (a) Explain the various methods for congestion control used in datagram subnets. 10  
(b) Explain HDLC Protocol. 10
- Q3: (a) What is the function of TCP Protocol? Discuss its header format. 10  
(b) Explain sliding window protocol using Go Back -N Techniques. 10
- Q4: (a) What is IPV4 Protocol? Explain the IPV4 Header format with diagram 10  
(b) What are transport service primitives? 10
- Q5: (a) Explain CSMA/CD. 10  
(b) List the features of Bluetooth and explain the network formation process. 10
- Q6: (a) Explain the different factors associated with quality of service in inter network. 10  
(b) What are the different types of routing? Explain any one in detail. 10
- Q7: Write short notes on: (any two) 20
- (a) SONET
  - (b) Satellite Networks
  - (c) Layer 2 v/s Layer 3 switching





**(OLD COURSE)**

**(3 Hours)**

**[Total Marks : 100**

- N. B. :** (1) Question No. 1 is compulsory.  
(2) Solve any **four** questions out of remaining **six** questions.

1. Write a short note on :- 20  
(a) Life cycle of servlet  
(b) Web service description language  
(c) Risk management  
(d) Test tools.
2. (a) Explain product related characteristics of web application. 10  
(b) Explain in detail requirement engineering activities. 10
3. (a) Explain in detail architecture for web document management. 10  
(b) Discuss in detail modeling specifics in web engineering. 10
4. (a) Discuss in detail client side technologies. 10  
(b) Discuss in detail typical methods and techniques for web application testing. 10
5. (a) Discuss in detail interaction design. 10  
(b) Explain in detail requirement engineering specifics in web engineering. 10
6. (a) What is an architecture? Explain factors influencing the development of an architecture according to Jacobson et. 10  
(b) Discuss in detail access modeling and its relation to content modeling. 10
7. (a) Explain following terms :- 10  
(i) Web engineering  
(ii) Web application  
(iii) Browser testing  
(iv) Requirement engineering  
(v) Streaming  
(b) Write short note on :- 10  
(i) Role of a tester  
(ii) Project tracking

**RJ-Con. 12005-15.**

