

**AP IIIT R K VALLEY RGUKT IDUPULAPAYA**  
**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**  
**NAME OF THE EXAM: EXTERNAL LAB**  
**AY1819- E2S2 SECTION A & B**

MAX. MARKS: 60 M

DATE OF EXAM: 24/04/2019

**SET-1**

- 1) a) Assume Sender sends "Welcome to Computer network" text to the receiver in this case how the data transfer between sender and receiver. Write a Java program to the functionality to effect the transmitting data at each layer.
- 1) b) Write a Java program to implement stop-and-wait protocol using sockets.  
(OR)
- 1) c) Write a Java program to implement Distance Vector Routing algorithm

**SET-01-VIVA QUESTIONS**

1. Definition of computer networks. And its characteristics.
2. What are the elements of transport protocols in transport layer.
3. Define socket. Importance of socket in client server interaction.
4. What is subnet? Differentiate fixed and variable length subnet.
5. Define transport entity. List the services of transport layer.

**SET-2**

- 2) a. Write a Java program to implement framing method using flag byte stuffing.
- 2) b. Write a Java program to implement checksum using sockets.  
(OR)
- 2) c. Write a Java program to implement Link state routing algorithm (Dijkstra algorithm)

**SET-02-VIVA QUESTIONS**

1. What is segment? How to divide the segments.
2. Differentiate the TCP and UDP.
3. Differentiate symmetric and asymmetric key algorithms.
4. Differentiate the CSMA/CD and CSMA/CA.
5. List the various types of routing algorithms. Identify which routing algorithm is better than others. Why?

**SET-3**

- 3) a. Write a Java program to implement framing method using flag bits with bit stuffing
- 3) b. Write a Java program to implement CRC using sockets.  
(OR)
- 3) c. Write a Java program to implement Distance Vector Routing algorithm

**SET-03-VIVA QUESTIONS**

1. List the error detecting techniques. Differentiate Single Dimensional and two dimensional parity check.
2. List the error detecting techniques. Differentiate CRC and checksum.
3. Define choke packet.
4. What is binary exponential backoff algorithm.
5. Differentiate between stop and wait protocol and go-back-n protocol. imported package (you can choose any one you used either in a or b programs).

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#### SET-4

- 4) a. Write a Java program to implement error detecting code using 2 dimensional parity.
- 4) b. Write a Java program to implement stop-and-wait protocol using sockets.  
(OR)
- c. Write a Java Program to implement Distance Vector routing algorithm

#### SET-04-VIVA QUESTIONS

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- 1. Differentiate the ARP and RARP.
  - 2. Define ethernet. Differentiate the switched ethernet and fast ethernet.
  - 3. Define DNS. Give its importance in current internet generation.
  - 4. What is cryptography?
  - 5. Differentiate public key and private key.
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#### SET-5

- 5) a. Write a Java program to implement error detecting code using cyclic redundancy check (CRC) using sockets.
- 5) b. Write a Java program to implement framing method using flag bits with bit stuffing  
(OR)
- 5) c. Write a Java Program to implement Link State routing algorithm (Dijkstra algorithm).

#### SET-05-VIVA QUESTIONS

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- 1. Mention the design issues of network layer.
  - 2. Define Frame. Mention different types of framing techniques.
  - 3. What are the design issues of data link layer.
  - 4. Define sliding window protocol.
  - 5. What are the multiple access protocols.
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