END TERM EXAMINATION

FOURTH SEMESTER [BCA] MAY- JUNE 2014

Paper Code: BCA-210	Subject: Computer Networks (Batch 2011)
Time: 3 Hours	Maximum Marks: 75

Note: Attempt any five questions including Q.no.1 which is compulsory. Select one question from each Unit.

Q1 (a) Define computer network. Explain different types of networks.
   (b) What are the connection less and connection oriented services?
   (c) Differentiate between CAN, MAN and WAN.
   (d) Differentiate between simplex, half duplex & full duplex transmission modes.
   (e) How TCP provides reliability in the network.
   (f) What is the difference between physical & logical address?
   (g) Discuss UDP datagram format.
   (h) Why is IP called best effort delivery protocol?
   (i) Differentiate between Broadcast, Multicast & Unicast.
   (j) How router boots up.   (10x2.5=25)

Unit-I

Q2 (a) Define Shannon Capacity theorem.   (2.5)
   (b) Differentiate between guided ad unguided transmission media. Explain in detail.   (10)

Q3 (a) Discuss 4 different topologies in detail with examples.   (4)
   (b) Compare OSI and TCP/IP models. Discuss different layers & their functions briefly.   (8.5)

Unit-II

Q4 (a) Differentiate between Circuit Switching & Packet Switching.   (6)
   (b) Discuss ISDN, its services & layers.   (6.5)

Q5 (a) Are the flow control & error control mechanism handled at the Data Link Layer? If yes, describe the techniques with which it can be handled. If no, explain with appropriate reasons.   (8)
   (b) Differentiate between WDM, TDM & FDM.   (4.5)

Unit-III

Q6 (a) Define repeaters, bridges, gateways & routers.   (2)
   (b) Show the header format for IPv4 & explain the function of each field.   (10.5)

Q7 (a) Distinguish between distance vector & link state routing. Explain with examples.   (8.5)
   (b) Differentiate between static & dynamic routing.   (4)

Unit-IV

Q8 (a) Compare TCP & UDP protocols.   (4)
   (b) Explain TCP packet format in detail.   (8.5)

Q9 (a) What are the functions of session layers, presentation layers & application layers in OSI model?   (6)
   (b) Explain three way handshaking in TCP.   (6.5)

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END TERM EXAMINATION

FOURTH SEMESTER [BCA] MAY- JUNE 2015

Paper Code: BCA-210	**Subject: Computer networks**
Time: 3 Hours	**Maximum Marks: 75**

Note: Attempt any five questions including Q.No 1 which is compulsory.
Select one question from each unit.

Q1   Attempt all.

(i)   In OSI network architecture, the framing is done by   **(2)**
     (a) session layer   (c) data link layer
     (b) network layer   (d) none of the above

(ii)   Which of the following communication modes support one-way traffic? **(2)**
     (a) simplex   (c) all of the above
     (b) half duplex   (d) none of the above

(iii)   The loss in signal power as light travels down the fiber is called   **(2)**
     (a) attenuation   (c) modem
     (b) propogation   (d) microwave systems

(iv)   Which of the following is not a transmission medium?   **(2)**
     (a) telephone lines   (c) modem
     (b) coaxial cables   (d) microwave systems

(v)   WAN stands for   **(2)**
     (a) Wireless network   (c) Wide area network
     (b) Wideband network   (d) None of above

(vi)   What are the advantages of the ring topology?   **(2)**
(vii)   What are the disadvantages of the mesh topology?   **(2)**
(viii) Explain Shannon Capacity theorem?   **(2)**
(ix)   Differentiate between attenuation and distortion?   **(2)**
(x)   Differentiate between TDM and FDM?   **(2)**
(xi)   Differentiate between static and dynamic routing?   **(2)**
(xii) Differentiate between Circuit switching and packet switching?   **(3)**

Unit-I

Q 2   Discuss the different components required for data communication? **(12.5)**

Q 3   What are the advantages of having layered model for networking? Explain OSI model mentioning the different functions performed by different layers?   **(12.5)**

Unit-II

Q 4   What do you understand by the error detection and error correction? Explain any one of the error correction technique with suitable example? **(12.5)**

Q 5   Write down a detailed note on ISDN?   **(12.5)**

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Unit-III

Q 6   What is the purpose of networking device? Explain the following
       networking devices:-   **(12.5)**
       (a) Repeaters   (c) Routers
       (b) Bridges   (d) Gateways

Q 7   What do you understand by routing? Explain any routing protocol in
       details?   **(12.5)**

Unit-IV

Q 8   Discuss any two protocols that are used at application/presentation
       layer?   **(12.5)**

Q 9   Discuss the role of transport layer in details?   **(12.5)**

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END TERM EXAMINATION

FOURTH SEMESTER [BCA] MAY-JUNE 2016

Paper Code: BCA-210	**Subject: Computer Networks**
Time: 3 Hours	**Maximum Marks: 75**

Note: Attempt any five questions including Q no.1 which is compulsory. Select one question from each unit.

Q1   (a) What are the two types of line configuration?   (2.5)
     (b) List four design issues in DLL of OSI model.   (2.5)
     (c) What is bandwidth-delay product?   (2.5)
     (d) Name two types of connectors for fiber-opertebles.   (2.5)
     (e) A multiplexer combines four 100kbps channels cables. Using a time slot of 2 bits. What is the frame rate and frame duration?   (2.5)
     (f) What is dynamic routing?   (2.5)
     (g) What is SYN flooding alteak?   (2.5)
     (h) Define Piggybacking and its benefit.   (2.5)
     (i) What does the Shannon capacity have to do with deta communication?   (2.5)
     (j) What is the use of sockets in process-to-process communication?   (2.5)

UNIT-I

Q2   (a) Explain multimode and single mode for propagating light along optical channels.   (5)
     (b) Discus various design issues for presentation and application layer of OSI model.   (7.5)

Q3   (a) What is the role of DTE-DCE interface in internetworking? Explain with some examples.(7.5)
     (b) Describe the three types of transmission impairment.   (5)

UNIT-II

Q4   (a) Discuss LRC, VRC and CRC error detection mechanisms.   (7.5)
     (b) What is Normal response mode and asynchronous balanced mode in data link control protocols.   (5)

Q5   (a) What is Synchronous Time-division multiplexing? Explain the process of Interleaving in TDM.   (7.5)
     (b) What is Broadband ISDN? How BRI and PRI works?   (5)

UNIT-III

Q6   (a) What is a Router? How router boots up? Explain the role of IOS in routers.   (7.5)
     (b) What is flooding in routing? Discuss the working of any dynamic routing algorithm.   (5)

Q7   (a) Explain the different types of classes in IPV4 addressing (classfull addressing)   (5)
     (b) Describe distance vector and link state routing algorithm.   (7.5)

UNIT-IV

Q8   (a) What is port addressing? list three ICANN ranges for port addressing.   (5)
     (b) With respect to TCP discus the role of the following:-   (7.5)
         (i) Sequence Number
         (ii) Acknowledgement Number.
         (iii) Window size
         (iv) Urgent points.

Q9   (a) Compare client-server and peer-to-peer application layer Paradigms   (5)
     (b) With respect to UDP discus the role of the following:-
         (i) Pseudo header   (3)
         (ii) Destination port number   (2)
         (iii) Length field.   (2.5)

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(Please write your Exam Roll No.)

END TERM EXAMINATION

FOURTH SEMESTER [BCA] MAY 2017

Paper Code: BCA-210　　　　　　　　　**Subject: Computer Networks**

Time: 3 Hours　　　　　　　　　　　　**Maximum Marks: 75**

**Note: Attempt any five questions including Q no.1 which is compulsory.
Select one question from each unit.**

Q1　(a) Discuss different types of Network Models and topology.　**(5)**
　　(b) Distinguish between FDM, TDM and WDM.　**(5)**
　　(c) Describe three Internetworking Devices.　**(5)**
　　(d) Discuss design responsibilities of Data Link layer of OSI Model.　**(5)**
　　(e) What is two-node loop instability problem? Discuss its two solutions.
　　　(5)

UNIT-I

Q2　Describe different technical specifications of UTP, Coaxial cable and Fiber optic cable as transmission media.　**(12.5)**

Q3　Discuss the following:-　**(12.5)**
　　(a) DTE-DCE Interface
　　(b) Different types of Transmission Impairments.
　　(c) Design responsibility of transport layer in OSI model.

UNIT-II

Q4　Discuss the following w.r.t error detection and correction-　**(12.5)**
　　(a) Redundancy
　　(b) Hamming Code
　　(c) Checksum

Q5　Discuss the following w.r.t ISDN-　**(12.5)**
　　(a) BRI
　　(b) PRI
　　(c) Different Reference points

UNIT-III

Q6　Explain the algorithm which forms the basis for Distance vector Routing? List its advantage and disadvantages.　**(12.5)**

Q7　What is Classful addressing? Discuss the role of Netid, Hostid, Mask, Subnetting and Supernetting.　**(12.5)**

UNIT-IV

Q8　Discuss responsibilities of Transport layer in OSI model. Explain the three-way handshake to establish the connection.　**(12.5)**

Q9　Explain the functionalities for the following:-　**(12.5)**
　　(a) Application Layer
　　(b) Session Layer
　　(c) Presentation Layer

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END TERM EXAMINATION

FOURTH SEMESTER [BCA] APRIL- MAY 2019

Paper Code: BCA 210

Subject: Computer Networks

Time : 3 Hours

Maximum Marks :75

Note: Attempt any five questions including Q. No. 1 which is compulsory. Select one question from each unit.

Q1. Attempt **any five** of the following: (5x5=25)
  a) Differentiate between LAN, MAN and WAN.
  b) Write a short note on DNS.
  c) Differentiate between TDM and FDM?
  d) How router boots up.
  e) What is the differences between physical & logical address? Give examples.
  f) Discuss 4 different topologies in detail with examples.

Unit-I

Q2. a) Explain the process of link state routing. Explain the events when the routing table is exchanged between routers?   (6)

  b) For the following topology, find the best path between each pair of nodes maintained in routing table using link state routing. Show the status of routing table at router A: (6.5)
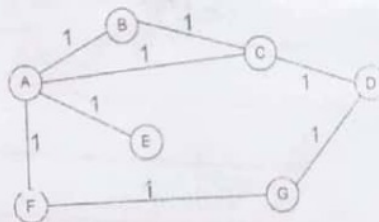
Q3. Discuss the different components required for data communication? Compare OSI and TCP/IP models. Discuss different layers & their functions briefly.   (12.5)

Unit-II

Q4. a) What is multiplexing? Explain various types of multiplexing.   (6.5)

  b) Discuss ISDN, its services & layers.   (6)

Q5. a) What do you understand by the error detection and error correction? Explain any one of the error correction technique with suitable examples?   (6)

  b) Which layer(s) is responsible for error detection and correction in OSI model?   (6.5)

Unit-III

Q6. a) What is flow control? Which two layers provide the functionality of flow control? How does their work differ?   (6)

P.T.O.

b) Differentiate between circuit switching, packet switching, and message switching. Which one the following switching is shown in figure (a), figure (b) and figure (c)? Justify your answer. **(6.5)**
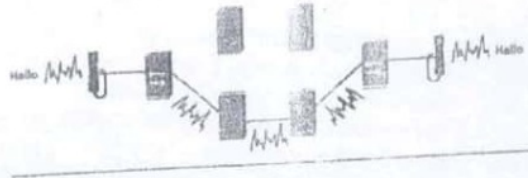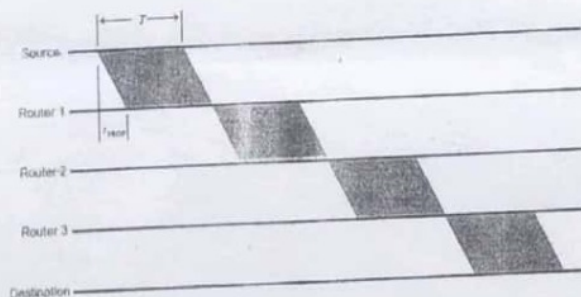
Figure (a)

Figure (b)

Figure (C)

Q7. What do you understand by routing? Explain any routing protocol in details? Differentiate between static & dynamic routing. **(12.5)**

Unit-IV

Q8. a) What are functions of session layers, presentation layers & applications in OSI models? **(6.5)**

b) Explain three way handshaking in TCP. **(6)**

Q9. a) Compare TCP and UDP protocols. **(6)**

b) Explain TCP packet format in detail. **(6.5)**

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END TERM EXAMINATION

THIRD SEMESTER [BCA] JANUARY-FEBRUARY 2023

Paper Code: BCA201   **Subject: Computer Networks**

Time: 3 Hours   **Maximum Marks: 75**

Note: Attempt five questions in all including Q.No.1 which is compulsory. Select one question from each unit.

Q1 Write short notes of the following **(Any five)**:   **(5×5=25)**
  a) What is the use of topologies in networking?
  b) What do you understand by Line Configuration?
  c) Explain Attenuation and Distortion.
  d) How Synchronous TDM is different from Asynchronous TDM?
  e) Differentiate between "packet switching" & "circuit switching".
  f) How IPV4 is different from IPV6?
  g) What is the difference between single bit error & burst error?

UNIT-I

Q2 a) Describe the components of Data Communication along with diagram.   **(5)**
  b) Explain OSI model. Write the functions and protocols of each layer.   **(7.5)**

Q3 a) Define networking and its goals.   **(5)**
  b) Explain Transmission Impairment in detail.   **(7.5)**

UNIT-II

Q4 a) What do you understand by Multiplexing? Describe WDM & FDM.   **(5)**
  b) Explain Hamming Code with the help of an example.   **(7.5)**

Q5 a) Define Bit-Stuffing. How it is different from character stuffing?   **(5)**
  b) Explain any three error detection methods?   **(7.5)**

UNIT-III

Q6 a) What do you understand by Routing? Differentiate between adaptive and non-adaptive routing.   **(5)**
  b) Describe repeater, router, switch, hub, bridge & gateway.   **(7.5)**

Q7 a) Differentiate between Distance Vector Routing & Link State Routing.   **(5)**
  b) What is subnetting? Describe Unicast Routing Protocols.   **(7.5)**

UNIT-IV

Q8 a) Compare the TCP header with UDP header.   **(5)**
  b) Explain Connection Management with the help of a diagram.   **(7.5)**

Q9 a) Discuss the design issue of session layer.   **(5)**
  b) Describe any five protocols present on application layer with their functionality.   **(7.5)**

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