ROLL NO. _____

Code: AT15   **Subject: INTERNET & WEB TECHNOLO**

AMIETE – IT (OLD SCHEME)

Time: 3 Hours   **OCTOBER 2012**   **Max. Marks: 100**

PLEASE WRITE YOUR ROLL NO. AT THE SPACE PROVIDED ON EACH PAGE IMMEDIATELY AFTER RECEIVING THE QUESTION PAPER.

NOTE: There are 9 Questions in all.
- **Question 1 is compulsory and carries 20 marks. Answer to Q.1 must be written in the space provided for it in the answer book supplied and nowhere else.**
- **The answer sheet for the Q.1 will be collected by the invigilator after 45 minutes of the commencement of the examination.**
- **Out of the remaining EIGHT Questions answer any FIVE Questions. Each question carries 16 marks.**
- **Any required data not explicitly given, may be suitably assumed and stated.**

Q.1 **Choose the correct or the best alternative in the following:** **(2×10)**

a. In OSI network architecture, the routing is performed by

   (A) network layer   **(B)** data link layer
   (C) transport layer   **(D)** session layer.

b. Which of the following is an important characteristic of LAN?

   (A) application independent interfaces
   (B) unlimited expansion
   (C) Low cost access for low bandwidth channels
   (D) parallel transmission

c. Which of the following device is used to connect two systems, especially if the systems use different protocols?

   (A) bridge   **(B)** hub
   (C) gateway   **(D)** repeater

d. Which of the following TCP/IP internet protocol a diskless machine uses to obtain its IP address from a server?

   (A) RDP   **(B)** RARP
   (C) RIP   **(D)** X.25

e. A modem is connected in between a telephone line and a

   (A) Network   **(B)** Computer
   (C) Communication adapter   **(D)** Serial port

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f. WAP internally uses the _____ language.

  (A) HTML   **(B)** WML
  (C) HDML   **(D)** XML

g. The SAX parser uses a _____ approach.

  (A) RANDOM   **(B)** sequential
  (C) dynamic   **(D)** hierarchical

h. EDI transactions are traditionally carried out over

  (A) VANs   **(B)** MANs
  (C) WANs   **(D)** LANs

i. To allow components developed in different programming languages to work together, the _____ language is used.

  (A) CORBA   **(B)** IDL
  (C) COM   **(D)** RMI

j. The _____ transforms HTTP requests and responses to WAP.

  (A) Web server   **(B)** WAP browser
  (C) WAP database   **(D)** WAP gateway

Answer any FIVE Questions out of EIGHT Questions.
Each question carries 16 marks.

Q. 2 a. Two basic approaches − Static and Dynamic routing are used to compute routing table entries in a large network. Discuss these briefly.   **(8)**

  b. Differentiate between TCP and UDP.   **(8)**

Q.3 a. Briefly describe the features of the following devices and standards, if any. **(8)** Also mention which layer of the OSI model they belong to.

          (i)   Repeater
          (ii)   Hub
          (iii) Switch
          (iv)   Bridge

  b. What is IP Telephony (VoIP)? Discuss its motivation and challenges also.   **(8)**

Q.4 a. Write brief note on Simple Network Management Protocol (SNMP).   **(6)**

  b. Discuss briefly about mail gateways.   **(6)**

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    c. What is protocol configuration?   **(4)**

Q.5 a. Address Resolution algorithms can be grouped into three basic categories. **(4)**
        Discuss briefly.

    b. One of the most interesting aspects of TCP is a mechanism for congestion
        control. Discuss briefly.   **(6)**

    c. Write down the characteristics of Open Shortest Path First (OSPF)   **(6)**
       protocol.

Q. 6 a. Write characteristics of clients and servers in Client-Server paradigm.   **(6)**

    b. Why was JSP required? Discuss its lifecycle.   **(6)**

    c. Why are active web pages powerful?   **(4)**

Q.7 a. What is a firewall? Discuss its architecture.   **(6)**

    b. Write short notes on 'Dynamic Web Page Technologies'.   **(6)**

    c. How is RMI different from CORBA?   **(4)**

Q.8 a. What is EDI? Describe its architecture in brief.   **(6)**

    b. State features of IPv6 that are different from IPv4.   **(6)**

    c. Describe briefly how TCP/IP model is different from OSI reference model. **(4)**

Q.9 a. Write basics of Wireless Markup Language (WML) and its most common
        features.   **(6)**

    b. Write short notes on any **TWO** of the following: **(10)**

            (i)   HTTP
            (ii)   DNS
            (iii)   TFTP