

**AMIETE – IT (OLD SCHEME)**

Time: 3 Hours

**DECEMBER 2011**

Max. Marks: 100

**NOTE: There are 9 Questions in all.**

- Please write your Roll No. at the space provided on each page immediately after receiving the Question Paper.
- 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. A repeater is \_\_\_\_\_ device used to propagate LAN signals over long distances.

- (A) Analog (B) Digital  
(C) Hybrid (D) None of the above

b. When the user interrupts the ping program, ping produces a summary that specifies the number of packets sent and received, packet loss, and \_\_\_\_\_ round trip times.

- (A) Minimum (B) Maximum  
(C) Mean (D) All of above

c. MIME stands for

- (A) Multipurpose Internet Mail Extensions  
(B) Multiple Internet Mail Extension  
(C) Multipurpose Internet Message Extension  
(D) None of these

d. A datagram head contains information, such as:

- (A) The address of the source (the original sender)  
(B) The address of the destination (the ultimate recipient)  
(C) A field that specifies the type of data being carried in the payload  
(D) All of the above

e. TCP provides \_\_\_\_\_ interface to applications.

- (A) Connection oriented (B) Connectionless  
(C) Both (A) & (B) (D) None of these

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- f. In IP Telephony, MGC-F stands for
- (A) Multi Gateway Controller Function
  - (B) Mini Gateway Controller Function
  - (C) Media Gateway Controller Function
  - (D) None of the above
- g. Collectively, the set of all objects SNMP can access is known as a \_\_\_\_\_
- (A) Abstract Syntax Notation (ASN)
  - (B) Management Information Base (MIB)
  - (C) Network Operating System (NOS)
  - (D) None of the above
- h. In General, all Web documents can be grouped into \_\_\_\_\_broad categories viz\_\_\_\_\_.
- (A) Two; static and dynamic
  - (B) Three; static, dynamic and active
  - (C) Four; HTML, DHTML, XML, ASP
  - (D) None of the above
- i. Local broadcast can be specified by using an IP address
- (A) 0.255.255.255
  - (B) 255.255.255.255
  - (C) 0.0.0.255
  - (D) None of these
- j. WAP stack is based more on the \_\_\_\_\_.
- (A) OSI Model
  - (B) TCP/IP Model
  - (C) CMM Model
  - (D) None of the above

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

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- Q.2** a. "A WAN does not need to be symmetric in the interconnections among packet switches." Illustrate the above statement using a diagram and an example. (8)
- b. Explain physical addressing in a WAN using a diagram. (8)
- Q.3** a. Write a brief description on the evolution of computer networks. (8)
- b. Discuss how the concept of Universal Service in a Heterogeneous World leads to internetworking. (8)
- Q.4** a. How does a packet pass across the Internet? (4)
- b. Discuss the original classes of IP Addresses. (6)

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- c. Write short notes on Internet Control Message Protocol (ICMP). (6)
- Q.5** a. What is the Format of an ARP Message? (9)
- b. What is the motivation for a change to IPv6 from IPv4? (5)
- c. What are the characteristics of Client software? (2)
- Q.6** a. What is TFTP? What is its purpose? Briefly explain its working. How is it different from FTP? (8)
- b. Draw a diagram showing interconnection of an IP system with PSTN. Describe the terms used in the diagram. (8)
- Q.7** a. Multiple groups have proposed protocols for VoIP, competing protocols exist at most layers of the protocol stack. Please list some of the proposed protocols along with their position in the Internet 5-layer reference model. (2)
- b. List some of the major security problems that exist on the Internet. (6)
- c. Provide an example of Abstract Syntax Notation.1 (ASN.1) coding for integers. (4)
- d. What are the two approaches to distribute the load between the client and server? (4)
- Q.8** a. What is XML? Describe its uses. Write a note on constituents of XML. (8)
- b. Explain the functionality of RPC and communication stubs used in RPC. (8)
- Q.9** a. What is EDI? What are the characteristics of EDI? What are its benefits? (10)
- b. Describe the WAP Stack. (6)