MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL
Paper Code : IT-701
INTERNET TECHNOLOGY

Time Allotted : 3 Hours   Full Marks : 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following : $10 \times 1 = 10$

i) In class *A* networks, maximum number of hosts per network are

    a) 122,048

    b) 16,777,214 .

    c) 65,536

    d) cannot be determined.

ii) At the time of TCP/IP connection establishment between client and server, when the server's SYN is received, the client sends back an ACK with

    a) new request number

    b) client request number with 1 added to client's ISN

    c) request number is server's ISN+1

    d) any one of these, depending on situation.

iii) Eavesdropping is a form of network attack

    a) where the process of listening in or overhearing parts of a conversation has been done

    b) when someone looks through your files in the hopes of finding something interesting

    c) that involves the deletion, insertion or alteration of information in an unauthorized manner

    d) all of these.

iv) W3C supports an XML-based alternative to DTD called

    a) schema   b) XML parser

    c) HTML DOM   d) none of these.

v) In Perl scalar variables

   a) always operate in the same manner as variables in algebraic functions

   b) are defined by two discreet values

   c) are the building blocks of more complicated data structure

   d) include string extensively.

vi) In java socket programming

   a) client must know the server port number without given its own

   b) server must know the client port number without given its own

   c) client should convey its port number and know server's port number

   d) server should convey its port number and know client's port number.

vii) Which of the following is the most commonly used VoIP standard ?

   a) SDP   b) IMS

   c) SIP   d) none of these.

viii) Cookies are stored in

   a) web server   b) application server

   c) database server   d) client machine.

ix) The position of SSL is between

   a) transport and application layer

   b) data link and transport layer

   c) network and transport layer

   d) physical and data link layer.

x) You need to subnet a network that has 5 subnets, each with at least 16 hosts. Which can be your choice ?

   a) 255.255.255.192

   b) 255.255.255.224

   c) 255.255.255.240

   d) 255.255.255.248

GROUP – B
(Short Answer Type Questions)
Answer any *three* of the following.   3 × 5 = 15

2. What is the use of style sheets ? Discuss Class selectors and ID selectors with proper example.   1 + 4

3. What are the differences between SAX and DOM XML Parser.

4. What are the types of Firewall ? Explain in brief.

5. What do you mean by Local Applet and Remote Applet ? Differentiate between Java Application and Java Applet.   2 + 3

6. What do you mean by Cookies ? Explain with example.

GROUP – C
(Long Answer Type Questions)

Answer any *three* of the following.   3 × 15 = 45

7. a) What are the different ways of adding styles (CSS) to a webpage ? Write the precedence rule (or priority) for the same with suitable example.

   b) Write HTML/JavaScript code for dividing the browser window into two frames (Left part is 'content' and Right part is 'main'). Left part should contain all the links, clicking on which corresponding page will be displayed at the Right part. Clearly state the assumptions regarding the developed code.   (4 + 4) + 7

8. a) Write a DTD and XML for the following database named "CustomerDb". The database may have many "Customer".

   - Customer Id (must be unique)
   - Customer Name (first and last name as to be specified) [Specify Age as attribute]
   - Phone Number (can be more than one)
   - Address
     — State
     — Pin
     — Country
   - Payment Type (Cheque, Debit/Credit card, DD)
   - Card Details (may or may not be there)
     — Card Number
     — Card Type (Domestic or International)

   b) Differentiate between XML DTD and XML schema definition.

   c) Write down the HTML/JavaScript code to change a series of images to a particular image.   8 + 3 + 4

9. a)
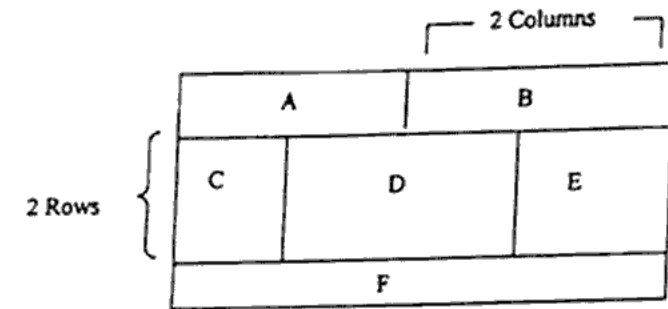
Write the HTML code for creating table which consists of 4 rows and 4 columns and the structure of the table should comply with the above figure.

   b) Describe in brief the different types of Network Security Attacks.

   c) Write down the names of the sections of HTML page where JavaScript can be written. Explain with example.   5 + 5 + 5

10. a) What are the differences between XML and HTML.

   b) **Write down the conditions to make an XML document a well formed XML.**

c) What is SSL ? Write down the "Handshake", "Record", "Alert" protocol.

d) What are the steps for adding randomness to a password.

e) What is Authentication Token ? Explain in brief.

$$3 + 3 + 5 + 2 + 2$$

11. Write short notes on any *three* of the following : 3×5

   a) VPN

   b) Applet Lifecycle

   c) VoIP

   d) IP masquerading

   e) CGI.

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