



**MAULANA ABUL KALAM AZAD UNIVERSITY OF
TECHNOLOGY, WEST BENGAL**

Paper Code : IT-701

PUID : 07040 (To be mentioned in the main answer script)

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 × 1 = 10

i) Choose the HTML attribute that is used to define inline styles ?

- a) Class ☒ b) Styles
☒ c) Style d) Font.

ii) Cookies are stored in

- a) Web server ☒ b) Web browser
c) Application server d) Database server.

iii) Identify the option that is not a J2EE product.

- a) Applet ☒ b) JSP
c) Servlet ☒ d) Active X Control.

iv) Driver Manager class is the member of which of the following packages ?

- a) java.util b) javax.servlet
c) java.io ☒ d) java.sql.

v) The in XML is equivalent to the schema in database

- a) Element b) Attribute
c) Parser ☒ d) DTD.

vi) Which one of the following is the correct syntax for importing a stylesheet in CSS ?

- a) @import url ("examples.css")
b) @import.cssurl ("example.css")
☒ c) @import-style url ("example.css")
d) @import-styleshecturl ("exmple.css").

vii) Which of the following is used to read parameters from JSP page ?

- a) <jsp:getParam/>action
b) <jsp:param>action
☒ c) request.getParameter() method
d) <jsp:readParam/>action.

viii) Which one of the following is a valid declaration of an applet ?

- a) Public class My Applet extends java.applet.Applet {
- b) Public Applet MyApplet {
- ☒ c) Public class MyApplet extends applet implements Runnable {
- ☒ d) Public class MyApplet extends java.applet.Applet {

ix) Which of the following statements is false ?

- a) A servlet runs at the back of JSP
- ☒ b) Stateless beans occupy more space than stateful session bean
- c) ODBC takes the help of DSN to get bonded with the database
- d) "Thin" belongs to the type-IV JDBC driver.

x) What does CSS stands for ?

- a) Computer Style Sheets
- ☒ b) Cascading Style Sheets
- c) Colourful Style Sheets
- d) Creative Style Sheet.

GROUP - B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

5/2

- 2. Write a brief note on the role of Java Script in client side data validation with suitable examples. State also briefly the need of client side validation.
- 3. Design firewall to block all traffic from 10.0.0.0/24, except port 23, 80 of TCP.
- 4. What is the advantage of using style sheet in formatting the different elements of web pages in a website ? How can we link a style sheet to a web page ?
- ☒ 5. Describe the anatomy of an XML document.
- 6. What do you mean by cookies, how to create and store a cookie with example ? <http://www.makaut.com>

GROUP - C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

- 7. a) A router with IP address 125.45.23.12 and Ethernet physical address 23 : 45 : AB : 4F : 67 : CD has received a packet for a destination with IP address 125.11.78.10 and Ethernet physical address AA : BB : A2 : 4F : 67 : CD. Show the entries in the ARP request packet sent by the router. Encapsulate the ARP request packet in a data link frame. Fill in all the fields.

- b) What is java RMI ? Why is RMI useful under modern computing environment ? $7 + 5 + 3$
8. a) In a class B subnet, the IP address of one of the hosts and the mask are given below :
- | | | |
|------------|---|----------------|
| IP Address | : | 125.134.112.66 |
| Mask | : | 255.255.224.0 |

What are the first address (network address) and the last address (broadcast address) in this subnet ?

- b) An organization granted a block of address with the beginning address 14.24.74.0/24. There are 256 addresses in this block. The organization needs to have 11 subnets. 2 subnets each have 64 addresses, 2 subnets each have 32 addresses, 3 subnets each have 16 addresses, 4 subnets each have 4 addresses. Design subnets.
- c) What content in the header of DNS response packet if a query for rabi.xyz.au.ac.in (let us taken IP is 10.3.4.5 and name server IP is 10.0.0.1).
- d) What is Multicast Addressing ? Describe the working principle of transport gateway. $1 + 7 + 4 + 3$

9. a) What is XML ? What is the basic structure of an XML document ?
- b) Compare between SAX and DOM approach in respect of XML Parsing.
- c) Create an xml document which has a root element emp. Root element contains more than one no. of employee element. Each employee has sub-element empname, id, gender and address. Address has the sub-element street, city, region, postalcode, countrycode. Street has two sub-elements street1 and street2. Countrycode has an attribute c_id. Write an external DTD to validate this XML.

$(2 + 3) + 4 + 6$

10. a) What is a tire ? What are the advantages of 3-tire architecture over 2-tire architecture ?
- b) What is Web container ? What is Servlet Engine ?
- c) Discuss about the Servlet life-cycle.
- d) What do you mean by active web page ?

$3 + 3 + 6 + 3$

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

- a) VPN
- b) Trojan Horse and Eavesdropping
- c) VoIP
- d) SSL
- e) Web Crawler
- f) ZPTV.

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