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Paper Code : BCAC501 Internet Technology

UPID : 500126

CS/BCA(A)/ODD/SEM-5/500126/2024-2025/1091

Time Allotted : 3 Hours

Full Marks : 70

The Figures in the margin indicate full marks.

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

Group-A (Very Short Answer Type Question)

1. Answer any ten of the following :

[1 x 10 = 10]

- (i) Explain the role of RTP (Real-time Transport Protocol) in multimedia streaming.
- (ii) Define FTP in networking?
- (iii) Name some popular HTML editor.
- (iv) What is the purpose of a conditional statement in PHP?
- (v) What is the primary goal of network security techniques?
- (vi) What does VoIP stand for in the context of telecommunications?
- (vii) What is the significance of IPtables in network security?
- (viii) How do you create a hyperlink in HTML?
- (ix) What is a regular expression in PHP used for?
- (x) Describe the purpose of Secure Shell (SSH) in network security.
- (xi) What are plugins commonly used for in multimedia applications?
- (xii) What is the purpose of an email client in electronic mail communication?

Group-B (Short Answer Type Question)

Answer any three of the following :

[5 x 3 = 15]

2. Write a code to implement GET method in PHP? [5]
3. Explain the different Network Security Techniques in Internet Technology [5]
4. Explain the components and functions of the Real-Time Transport Protocol (RTP) in detail. [5]
5. Explain the three-way handshake process in TCP/IP communication and why it is important. [5]
6. Describe the principles of error control, flow control, and congestion control in networking. [5]

Group-C (Long Answer Type Question)

Answer any three of the following :

[15 x 3 = 45]

7. (a) Explain the concept of image maps in HTML, including how they are created and how they work using the <map> and <area> elements. Provide an example. [9]
(b) Write a code to illustrate the use of XML. [6]
8. (a) Explain the different types of conditional statements in JavaScript and illustrate their use with code examples. [7]
(b) Illustrate with example of cookies. [3]
(c) Differentiate with proper example of Server side programming language and scripting language. [5]
9. Write a short note on [5+5+5]
(a) VPN
(b) IP Security
(c) Secure Shell (SSH)
10. (a) Explain RTCP, and RTSP. Explain how these protocols work together to enable real-time multimedia communication over IP networks? [10]
(b) Explain with details working procedure of Internet Telephony (VoIP) [5]
11. You are tasked with creating a simple web application that allows users to register and log in. The application should have the following functionalities: [15]
User Registration:
Users should be able to register with a username and password.
Usernames should be unique.

User Login:

Registered users should be able to log in with their username and password.

After successful login, users should see a welcome message.

Session Management:

Implement a session management system to keep users logged in across multiple pages.

Logout:

Implement a logout function that securely logs users out.

Error Handling:

Provide meaningful error messages for situations such as invalid login, duplicate usernames, and registration success.

*** END OF PAPER ***