GOA UNIVERSITY

T.Y.B.C.A. (NEP) (Semester - V)
Subject Name: Internet Technologies

Paper Title: Internet Technologies **Paper Code: CSA-303**

Duration: 1:00 Hour **Total Marks:40**

Instructions: i) All questions are compulsory and figures to the right indicate full marks.
ii) Questions of 2 marks to be answered in approximately 40 words.
iii) Questions of 4 marks to be answered in approximately 80 words.

Q1 Answer the Following. **(4 x 2 = 08 Marks)**

i) Define a hub in computer networking. List one key function it performs.
ii) What is Network Address Translation (NAT)? Why is it used in networking?
iii) What is network security, and why is it important?
iv) What is e-commerce?

Q2 A. i) Explain how data is transmitted in a mesh topology. **2 Marks**

ii) Explain one advantage and one disadvantage of using mesh topology. **2 Marks**

OR

iii) Explain how devices communicate in a peer-to-peer network. **2 Marks**
iv) Describe benefits of using a peer-to-peer network in small organizations. **2 Marks**

Q 2 B i) What is NIC and name its two types **2 Marks**
ii) What is an ISP? Explain its role in providing internet access. **2 Marks**

3A i) An organization is assigned a Class C network address of 201.35.2.0. It uses a subnet mask of 255.255.255.192 to divide this into sub-networks. **4 Marks**

Which of the following IP addresses are valid host IP addresses?

A) 201.35.2.129

B) 201.35.2.191

C) 201.35.2.255

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Explain your answer.

OR

ii) An organization is assigned a Class C network: 192.168.5.0/24. The network administrator wants to divide it into subnets with at least 20 valid host addresses each. **4 Marks**

Using your knowledge of IP addressing:

1. What subnet mask should the administrator use?
2. How many subnets will be created?

Q 3 B. i) A developer is designing a web form that allows users to submit feedback to a server. Which HTTP method should they use to send the data, and why is this method appropriate? **2 Marks**

ii) What is DNS, Explain in brief? **2 Marks**

Q4 A i) Compare how two different search engines (e.g., Google and Bing) display results for the same search query **2 Marks**

ii) Explain with reasons whether search engines always provide the most reliable information at the top of the search results. **2 Marks**

OR

Q4 a iii) Differentiate between the roles of a crawler and an indexer in a search engine. **2 Marks**

iv) Analyse why two users searching the same term on the same search engine may receive different results. **2 Marks**

Q4 B i) Analyse the Phishing and Social Engineering security issue with respect to their impact with an example. **2 Marks**

ii) Analyse any one future trend of e commerce **2 Marks**

Q5 A i) State and explain any two types of firewalls. **2 Marks**

ii) Compare any two key principles of network security and explain how they collectively contribute to securing a system. **2 Marks**

OR

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Q5a. iii) Analyse how active attacks can compromise network security. **2 Marks**

iv) Analyse any one common threat to network security and evaluate its potential impact on an organization's operations. **2 Marks**

Q5 B i) You are asked to upload a large file from your local system to a remote web server. Explain how FTP can be used in this scenario and what its main purpose is. **2 Marks**

ii) You are part of a remote team working on a group project. Explain how using a chat application can help in this situation and state its main purpose. **2 Marks**

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