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GOPAL GOVIND POY RAITURCAR COLLEGE OF COMMERCE ANDECONOMICS, PONDA - GOA

B.C.A. (SEMESTER- IV) EXAMINATION JUNE 2022

DATA COMMUNICATIONS

Duration: 2 Hours

Marks: 60

**Q.1. A) Fill in the Blanks:**

(5x1=05)

- a) In \_\_\_\_\_ mode, simultaneous transmission and reception of messages can happen.
- b) In \_\_\_\_\_ cryptography, the same key is used by both the parties.
- c) The combination of an IP address and a port number is called a \_\_\_\_\_ address.
- d) In \_\_\_\_\_ protocol, the sender does not know if a message has been lost or duplicated.
- e) The universal port numbers used for servers are called \_\_\_\_\_ port numbers.

**B) Define the following:**

(5x1=05)

- a) Data Communication.
- b) Firewall.
- c) Phishing.
- d) Address Space.
- e) Connection Oriented Service.

**Q.2. Answer the following:**

- A) State the components of Data Communication. Draw a neat diagram for the same. (02)
- B) Explain the categories of network. (03)
- C) Write a short note on any two network topologies. (05)

**Q.3. Answer the following:**

- A) Differentiate between Intranet and Extranet. (02)
- B) Explain the working of ARP protocol. (03)
- C) With the help of a neat diagram, explain Physical Addressing. (05)

**Q.4. Answer the following:**

- A) Explain in brief the working of DNS. (02)
- B) Draw a neat diagram for IPV4 Header and explain any two fields. (03)
- C) With the help of a neat diagram, explain the data exchange using OSI Model. (05)

**Q.5. Answer the following:**

- A) State the two prevalent notations to show an IPv4 address. Convert the given address from one notation to another. Address: 01110101 10010101 00011101 00000010 (02)
- B) With the help of a neat diagram, explain the UDP Header. (03)
- C) Write a short note on Connecting Devices. (05)

**Q.6. Answer the following:**

- A) Explain Multiplexing and Demultiplexing. (02)
- B) What happens when a TCP segment is lost. (03)
- C) Write a short note on Network Address Translation. (05)

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