

GOA VIDYAPRASARAK MANDAL'S

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

B.C.A. (SEMESTER- IV) SUPPLEMENTARY EXAMINATION JULY 2022

DATA COMMUNICATIONS

Duration: 2 Hours

Marks: 60

Instructions: i) All questions are compulsory.

ii) Figures to the right indicate full marks.

Q.1. A) Fill in the Blanks: (5x1=05)

- a) _____ is the Physical path by which the message travels.
- b) _____ is a process-to-process protocol.
- c) The combination of an IP address and a port number is called a _____ address.
- d) Message _____ means that the transmitted message must make sense to only the intended receiver.
- e) The universal port numbers used for servers are called _____ port numbers.

B) State if the following statements are True or False: (5x1=05)

- a) LAN provides long distance transmission over large geographic areas.
- b) An IPv4 address is 128 bit long.
- c) In TCP header, the acknowledgment number defines the number of the next byte that the party expects to receive.
- d) Adware is designed to track data of your browsing habits and, based on that, show you advertisements and pop-ups.
- e) A proxy firewall is a router that uses a filtering table to decide which packets must be discarded.

Q.2. Answer the following:

- A) Define Protocol. What are the key elements of a protocol? (02)
- B) Explain the data flow mechanisms in Data Communications. (03)
- C) Explain in brief the various physical topologies. (05)

Q.3. Answer the following:

- A) Explain in brief the address depletion problem in classful addressing. (02)
- B) Explain the Network Address Translation using one IP address. (03)
- C) With the help of a neat diagram, explain Physical Addressing. (05)

Q.4. Answer the following:

- A) State the uses of User Datagram Protocol. (02)
- B) With the help of a neat diagram, explain the working of ARP. (03)
- C) Draw a neat diagram and explain the responsibilities of Physical Layer. (05)

Q.5. Answer the following:

- A) What are the types of URL. (02)
- B) With the help of a neat diagram, explain the connection establishment phase of TCP. (03)
- C) Write a short note on Connecting Devices. (05)

Q.6. Answer the following:

- A) State the differences between HTTP and HTTPS. (02)
- B) With the help of a neat diagram, explain the UDP Header. (03)
- C) With the help of a neat diagram, explain the IPv4 Header Format. (05)
