**College of Applied Business & Technology**

**Sent-up Examination, March 2024**

**BIM / 4th Semester/ IT 240: Business Data Communication and Networking**

*Candidates are required to give their answers in their own words as far as practicable.*

**Section ‘A’ Time: 20 minutes**

**Brief answer question. Attempt any ten. [10×1=10]**

1. What is the role of Data link layer in OSI model?
2. What is the function of IMAP?
3. Define guided and unguided communication media.
4. Why do we need subnetting?
5. Differentiate WIFI with WIMAX.
6. What is Analog and Digital signal?
7. What is VLAN?
8. What is IEEE 802.1q?
9. What is the bit size of Ipv4 and IPv6 address?
10. What is the purpose of using a browser?
11. What are the components of Software agents?

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**Section ‘B’ Time: 30 minutes**

**Short answer question. [2×5=10]**

1. What is Backbone Network? Write down the 3/3 characteristics of Switched backbone and Routed backbone with diagram.
2. What is internet? What are the differences between Internet and World Wide Web? Explain with examples.

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**Section ‘C’ Time: 70 minutes**

**Long answer question. Attempt any Four. [4×5=20]**

1. Explain the layers used in OSI reference model with examples.
2. Given network is 192.168.1.0/25, calculate a) How many subnets? b) How many hosts per subnet? c) Valid subnets d) Valid host ranges e) subnet mask.
3. What is VLAN? How does it work? Discuss the benefits of VLAN.
4. What are the rules of IPv6? Explain IPV6 header format in details.
5. A bit stream 1101011011 is transmitted using the standard CRC method. The generator polynomial is x^4+x+1. What is the actual bit string transmitted? Will that transmitted bit streams be accepted by receiver too?