**SPRING MID SEMESTER EXAMINATION-2019**
**School of Computer Engineering**
KALINGA INSTITUTE OF INDUSTRIAL TECHNOLOGY
DEEMED TO BE UNIVERSITY, BHUBANESWAR-24

COMPUTER NETWORK
[IT-3001]

**Time: 1.5 Hours** **Full Marks: 20**

***Answer any four questions including question No.1 which is compulsory. The figures in the margin indicate full marks. Candidates are required to give their answers in their own words as far as practicable and all parts of a question should be answered at one place only.***

Q 1. a. What is the principal difference between connectionless and connection-oriented communication? [5×1]

b. For a P2P file-sharing application, do you agree with the statement, "There is no notation of client and server sides of a communication session" ? Why or why not ?

c. What would be the type for the Resource Record (RR) that contains the canonical host-name for a host?

d. Explain the role of DNS.

e. What is the significance of physical and logical addressing in Computer Networks.

Q2. a. Consider sending a packet from a source host to a destination host over a fixed route. List and explain the delay components in the end-to-end delay. Which of this delays are constant and which are variable? [3]

b. Sketch the flow of a typical email from Alice to Bob. Assume that Alice and Bob are on different "networks" (say, they are located in different parts of the world). Identify the key components (both hardware and software) and protocols in the flow. [2]

Q3. a. What is DNS and what is it used for? If all DNS servers could be "crashed" (taken offline), what would happen to the Internet (be precise). [3]

b. In SMTP, a sender sends unformatted text. Write and explain the MIME header for his message. [2]

Q4. a. Explain why OSI is called as a model, whereas TCP/IP is called as a protocol suite. Be precise. [3]

b. What is the difference between centralized P2P network and de centralized P2P network? [2]

Q5. Write short note on any two. [2.5 + 2.5]
a. Conditional-GET
b. Piggybacking.
c. UDP datagram format.

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