

<b>8E 8024</b>	Roll No. <u>15EE22E1050</u> <b>8E 8024</b>	Total No. of Pages : <u>2</u>
<b>B.Tech. VIII Semester (Main/Back) Examination. April.2019</b> <b>Electronic Instrumentation &amp; Control Engg.</b> <b>8EI4.3A Computer Networks</b> <b>Common with EC,EI</b>		

Time : 3 Hours

Maximum Marks : 80  
Min. Passing Marks : 26

**Instructions to Candidates:**

*Attempt any Five questions, selecting One question from each unit. All Questions carry equal marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly Units of quantities used/calculated must be stated clearly).*

**Unit - I**

1. a) Derive and explain mathematical model for  $M/M/\infty$  queue in detail. (10)
- b) Explain Little's formulae with the help of appropriate example. (6)

(OR)

1. a) Derive and explain mathematical model for  $M/M/m/m$  queue in detail. (10)
- b) Explain the concept of pure death and pure birth process with the help of appropriate example. (6)

**Unit - II**

2. a) Explain TCP/IP reference model in detail. (10)
- b) What is Virtual Circuit Network? Explain. (6)

(OR)

2. Write short notes on:

- a) Sliding window protocol (8)
- b) Go back N Protocol (8)

**Unit - III**

3. a) Explain static and dynamic channel allocation schemes in detail. (8)  
b) Describe Network connection devices in detail. (8) →

(OR)

3. Write short notes on:

- a) Token Ring and Token bus. (8)  
b) ALOHA and Slotted ALOHA. (8)

**Unit - IV**

4. a) Explain Link State Routing algorithm along with suitable example. (10)  
b) Explain OSPF and BGP. (6)

(OR)

4. a) Explain Adaptive routing algorithms in detail. (8)  
b) Write short note on IPV4 and IPV6. (8)

**Unit - V**

5. Explain heavy bucket and Token bucket algorithms in detail. (16)

(OR)

5. Write short notes on:

- a) Data Traffic descriptors (8)  
b) Congestion Control algorithms (8)