

**B.TECH. SEM -V INFO. TECH. 2014 COURSE (CBCS) :  
SUMMER - 2018**

**SUBJECT: DATA COMMUNICATION & NETWORKS**

Day: **Tuesday**  
Date: **22/05/2018**

**S-2018-2358**

Time: **10.00 AM TO 01.00 PM**  
Max. Marks: 60

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**N.B.:**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the right indicate **FULL** marks.
  - 3) Draw neat diagrams **WHEREVER** necessary.
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**Q.1** Explain Transmission impairments that affect data communication in detail. **(10)**  
Also explain types of errors in data communication.

**OR**

**Q.1** Discuss Digital to Digital and Analog to Analog conversion in brief. **(10)**

**Q.2** Enlist and explain various Guided and Unguided Media used in data communication. Compare Optical fiber Cable with Coaxial Cable and Twisted pair cable. **(10)**

**OR**

**Q.2** Describe in detail, Connection oriented and Connectionless services. **(10)**

**Q.3** Write a detail note on Parallel and Serial Transmission. **(10)**

**OR**

**Q.3** State various types of Spread spectrum techniques and explain them in detail. **(10)**

**Q.4 a)** Write the functions of network components Hubs, Switches, Repeaters, Routers and Bridges. **(05)**

**b)** Describe different network topologies Star, Mesh, Ring and Bus. **(05)**

**OR**

**Q.4** Comment on TCP/IP protocol stack. How it is different than OSI/ ISO seven layers Model? **(10)**

**Q.5** Show the IPv6 header details and explain them. Compare IPv4 vs IPv6. **(10)**

**OR**

**Q.5** Define and explain RIP algorithm with example. **(10)**

**Q.6** List the various functions of the transport layer and explain each in brief. Compare UDP and TCP. **(10)**

**OR**

**Q.6** What is World Wide Web (WWW)? Draw and explain architectural overview of the World Wide Web. **(10)**

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