

Hall Ticket Number:

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Code No. : 33004

**VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD**  
**M.C.A. (CBCS) III-Semester Main Examinations, January-2018**

**Computer Networks**

Time: 3 hours

Max. Marks: 70

*Note: Answer ALL questions in Part-A and any FIVE from Part-B*

**Part-A (10 × 2 = 20 Marks)**

1. Write some of the issues of TCP/IP model.
2. Identify the five components of a data communications system.
3. What are hamming codes? How do you use them to correct burst errors?
4. Write short notes on CSMA/CD.
5. What are classful addressing and classless addressing?
6. Define autonomous system? What are the areas in Autonomous system?
7. Define congestion and list the congestion control mechanisms.
8. What is weighted fair queuing?
9. Define DNS. What are FQDN and PQDN?
10. What is an anonymous FTP?

**Part-B (5 × 10 = 50 Marks)**

11. a) Define Topology. Explain various categories of Topology. [7]  
b) Write short note on RS232 interfacing. [3]
12. a) Explain in detail about Selective Repeat with example. [6]  
b) Differentiate between pure aloha and slotted aloha. [4]
13. a) Explain in detail IPV4 Datagram format. [6]  
b) Explain Dijkstra Algorithm for formation of shortest path using an example. [4]
14. a) What are Transport layers Primitives? Explain? [6]  
b) What is traffic shaping? Explain the Leaky Bucket in detail? [4]
15. a) Discuss about DNS. [5]  
b) Define HTTP protocol? Explain the different HTTP messages. [5]
16. a) Explain the responsibilities of Physical layer, Data link layer and Network Layer. [6]  
b) Illustrates the calculation for a frame 1101011011 using generator polynomial  $x^4+x+1$ . [4]
17. Answer any *two* of the following:
  - a) An organization is granted the block 211.17.180.0/24. The administrator wants to create 32 subnets. [5]
    - i) Find the subnet mask.
    - ii) Find the number of addresses in each subnet.
    - iii) Find the first and last addresses in subnet 1.
    - iv) Find the first and last addresses in subnet 32.
  - b) What are the major differences between Integrated Services and Differentiated Services? [5]
  - c) Write short note on Dynamic Documents. [5]

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