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Question Paper Code : 85950

M.E./M.TECH.DEGREE EXAMINATIONS – NOV / DEC 2020

Elective

Communication systems

NC5071 NETWORK ROUTING ALGORITHMS

(Common to: Communication and Networking/Electronics and Communication Engineering)

(Regulation 2017)

Time: 3 Hours

Answer ALL Questions

Max. Marks: 100

PART- A (10 x 2 = 20 Marks)

1. What is crank back?
2. What are the metrics used in determining the best path for a routing protocol?
3. Distinguish between Interior and Exterior routing protocols?
4. Mention any four applications of multicasting.
5. What are the advantages of optical fiber as a transmission medium?
6. Define Fairness in optical networks?
7. What is CoA? What are the possibilities for the location of CoA?
8. Why are special protocols for the support of micro mobility on the network layer needed?
9. Name the main differences between multi-hop ad-hoc networks and other networks.
10. How does the symmetry of wireless links influence the routing algorithms proposed?

PART- B (5 x 13 = 65 Marks)

11. a) Explain in detail the Trunk state Map Routing and the routing mechanisms in telephone network?

(13)

OR

- b) i) Define Routing and explain in detail the distance vector routing protocol with an example. (7)
- ii) Outline the functions of each layer in TCP/IP architecture with neat diagram. (6)
12. a) i) Explain how LSR is adopted for use in OSPF? Explain the routing principle of OSPE with an example? (8)
- ii) Mention the features of core based Tree routing. (5)

OR

- b) List the various advantages and limitations of Exterior Routing protocols? Describe in detail the operation Border Gateway protocol with an example. (13)
13. a) Describe about various rerouting schemes in optical WDM networks? (13)

OR

- b) What are the board classification of RWA algorithms? Explain about any two RWA algorithms in detail. (13)
14. a) Why is routing in mobile networks complicated? Describe in detail how mobility is supported in Macro-mobility protocols? (13)

OR

- b) Describe in detail the three methods of routing based micro-mobility support in mobile networks? (13)
15. a) Compare and contrast proactive and reactive routing protocols? Explain in detail the operation of AODV protocol with example? (13)

OR

- b) Mention the fundamental differences between wired networks and ad-hoc wireless networks related to routing? Explain in detail the operation of DSDV Routing protocol with and example. (13)

PART- C (1 x 15 = 15 Marks)

16. a) Differentiate between Multicast and Multiple unicast routing? Describe the operation of DVMRP with an example? (15)

OR

- b) What is the motivation behind dynamic source routing compared to other routing algorithms from fixed networks? Explain in detail how does Dynamic Source Routing handle routing? (15)
