

2019

Time : 3 hours

Full Marks : 70

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Answer from all the Sections as directed.

Section – A

(Objective Type Questions)

(Compulsory)

1. Choose the correct answer of the following :

2×10 = 20

(a) Consider a noiseless channel with a bandwidth of 3000 Hz transmitting a signal with two signal levels. What is the maximum bit rate ?

- (i) 3000 bps

- (ii) 6000 bps
- (iii) 9000 bps
- (iv) 4500 bps

(b) The subnet mask of Class C is :

- (i) 8
- (ii) 16
- (iii) 24
- (iv) 32

(c) In digital-to-digital encoding _____ the change or lack of change in the level of the voltage determines the value of the bit.

- (i) NRZ
- (ii) NRZ-L
- (iii) NRZ-I
- (iv) None of these

(d) An analog signal carries 4 bits per signal element. If 1000 signal elements are sent per second find the bit rate :

- (i) 2000 bps

~~(ii)~~ 4000 bps

(iii) 6000 bps

(iv) 8000 bps

(e) The full form of RFC is :

(i) Request for Comment

~~(ii)~~ Request for Comments

(iii) Request for Commerce

(iv) Request for Contrast

(f) Which of the following TCP / IP protocol is used for remote terminal connection service ?

(i) TELNET

(ii) RARP

(iii) SSH

(iv) FTP

(g) Which is highly reliable topology ?

(i) Mesh

(ii) Ring

(iii) Bus

(iv) Tree

(h) The protocols that are used on network layer are :

(i) SMTP, UDP, TCP

~~(ii)~~ TCP, UDP

(iii) HTTP, HTTPS

~~(iv)~~ IP, ICMP, IGMP

(i) Which co-axial cable used BNC connector ?

(i) Thick <http://www.ppuonline.com>

(ii) Thin

(iii) Both (i) and (ii)

(iv) None of these

(i) The maximum throughput of Slotted ALOHA is :

(i) 0.184

(ii) 0.368

(iii) 0.552

(iv) None of these

Section – B

(Short-answer Type Questions)

Answer any four of the following questions :

5×4 = 20

2. What is Least-Cost algorithm ?
3. How switch is different than Hub ?
4. Write a short note on TCP / IP model.
5. What is Distance Vector routing ? Explain.
6. Explain ISDN.
7. Explain different types of Transmission modes.

Section – C

(Long-answer Type Questions)

Answer any three questions of the following :

10×3 = 30

8. What is IPv4 ? Explain different types of classes.

9. What is OSI reference model ? Explain in details.

10. What are guided media ? Explain any three among them.

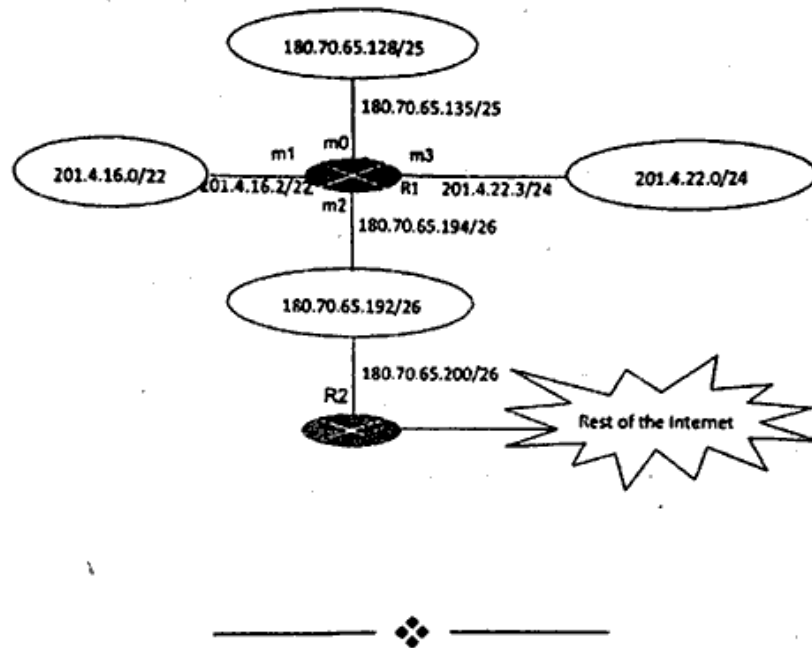
11. Differentiate any two of the following :

- (a) Intradomain routing and Interdomain routing
- (b) RIP and OSPF
- (c) Pure ALOHA and Slotted ALOHA
- (d) HTTP and HTTPs
- (e) FTP and TELNET
- (f) Wired and Wireless networks

12. Explain any two of the following :

- (a) DNS
- (b) WWW
- (c) Microwave
- (d) Go Back n
- (e) IEEE 802.3

13. Show the forwarding process if a packet arrives at R1 in the following figure with the destination address 180.70.65.140.



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