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53 (IT 821) INPR

2015

INTERNET PROTOCOL

Paper : IT 821

Full Marks : 100

Time : Three hours

The figures in the margin indicate full marks for the questions.

Answer **any five** questions out of seven.

1. (a) In IPv4 Classless Addressing, one of the addresses in a block is 110.23.120.14/20. Find out the number of addresses, the first address and the last address of the block. 6
- (b) Describe subnet masking. What is supernetting? 4+3
- (c) Design the block 130.34.12.64/26 into 4 equal nos. of subnetworks. 7

Contd.

2. (a) Briefly describe the services provided by the network layer at source computer and at router. 5+5
- (b) Describe bluetooth technology and its frame format. 10
3. (a) Define the type of the following destination address 3
- (i) 44 : 30 : 10 : 21 : 10 : 1A
- (ii) 89 : 20 : 1B : 2E : 08 : EE
- (iii) FF : FF : FF : FF : FF : FF
- (b) Describe CSMA / CA flow diagram. What is NAV ? 5+2
- (c) What do you mean by “hidden and exposed station problem” ? State the solution mechanisms of the problems, if any. Define ‘piconet’ and ‘scatternet’. 4+2+4
4. (a) Discuss Longest Mask Routing. What is address aggregation ? 5+5
- (b) Discuss the major security issues of the IT Protocol. 6
- (c) Discuss IPSec. 4

5. (a) Discuss the packet format & Encapsulation of ARP packet. 5+5
- (b) Discuss with example how checksum is calculated in ICMP ? 6
- (c) What is the uses of UDP ? 4
6. (a) What is TFTP ? Explain TFTP with an suitable example. 3+5
- (b) What is DNS ? Explain with an example. 2+3
- (c) Write down the differences between IPv4 and IPv6.
- What are the major advantages of IPv6 over IPv4 ? 4+3
7. Write short note on : 4×5
- (a) SSL
- (b) IPSEC
- (c) BOOTP-DHCP
- (d) Anonymous FTP.