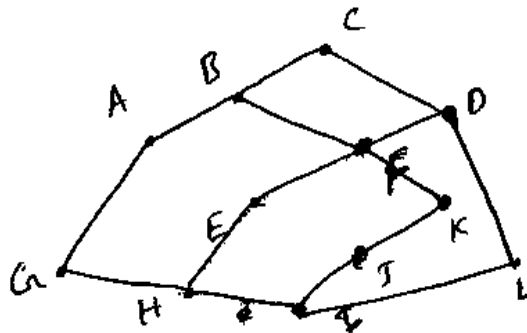


FACULTY OF INFORMATICS**B.E. 3/4 (IT) II – Semester (Supplementary) Examination, January 2015****Subject : Computer Networks****Time : 3 hours****Max. Marks : 75****Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.****PART – A (25 Marks)**

- 1 What is the principal difference between connectionless and connection-oriented communication? 3
- 2 List the two ways in which the OSI reference model and TCP/IP reference models are different. 2
- 3 Draw the pseudoheader format. 2
- 4 A class B network on the internet has a subnet mask of 255.255.240.0 what is the max no. of hosts per subnet? Explain. 3
- 5 Mention the differences between these system calls send, sendto and recv, recvfrom. 3
- 6 What is meant by out band date? 2
- 7 Give two reasons for why PGP compresses message. 2
- 8 Explain about RFC822 message header. 3
- 9 What is cryptography? 2
- 10 List the cipher modes. Explain any one. 3

PART – B (50 Marks)

- 11 a) Compute a multicast spanning tree for router 'C' in the subnet below for a group with members at routers A, B, C, D, E, F, I & K 6



- b) What is the difference between OSI and TCP/IP model. 4
- 12 a) Explain about BGP. 4
- b) Classify IP addresses and explain. 6

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| 13 | a) | Explain about connection-less communication with block diagram using elementary system calls. | 5 |
| | b) | Explain about IPV4 and IPV6 interoperability. | 5 |
| 14 | a) | Explain about MIME types and subtypes defined in RFC 1521. | 6 |
| | b) | Draw the format of a PGP message. | 4 |
| 15 | a) | Explain about RSA algorithm. | 5 |
| | b) | Differentiate between public key and private key algorithms. | 5 |
| 16 | a) | Explain about TCP segment header. | 6 |
| | b) | Explain about any two congestion control algorithms. | 4 |
| 17 | | Write a short notes on the following : | |
| | a) | Authentication protocols | 4 |
| | b) | Digital signature | 3 |
| | c) | Voice over IP | 3 |
