

165

Sem IV IT- CBCGS, MAY-18

Q. P. Code: 38761

17/5/18

CN

[Time: Three Hours]

[Marks: 80]

Please check whether you have got the right question paper

N.B.:

1. Question number **ONE** is compulsory
2. Attempt any **THREE** questions from question 2 to 6
3. Figures to the right indicate full marks.

Q. 1. Answer any **FOUR** from the following

20

- a) What are the routing devices in computer network? Explain each of them in brief.
- b) Compare lossy with lossless data compression technique.
- c) List five nonproprietary Internet applications and the application-layer protocols that they use.
- d) Examine the advantages of LAN, WAN and MAN.
- e) Examine problems in Application Layer.

Q. 2 a) Explain TCP network model for network communication. Hence, choose a layer which is responsible for routing of packets.

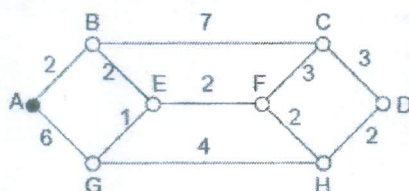
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Q. 2 b) Explain Client-Server communication architecture.

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Q. 3 a) Create a shortest path between node A and D

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Q. 3 b) What is IP? Explain IPv6 Header.

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Q. 4 a) Justify that the Stop-and-Wait protocol is not good for network communications.

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Q. 4 b) Justify Hamming Code is error detection and correction code.

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Q. 5 a) What is MACA? Explain by giving suitable example.

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Q. 5 b) What is carrier sense? Explain any one carrier sense protocol.

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Q. 6. Answer any **FOUR** from the following

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- a) Examine different types of ALOHA.
- b) What is broader gateway protocol (BGP) Explain BGP in brief.
- c) Why do HTTP, FTP, SMTP, and POP3 run on top of TCP rather than on UDP?
- d) Compare various data flow control techniques.
- e) What is classful addressing? Explain difference classes of IP address.

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Sem IV CBSWS IT- MAY-18

CW

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1. Question number **ONE** is compulsory
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Q. 1. Answer any **FOUR** from the following

- a) Define Hub, Switch, Router, Bridge and Gateway
- b) What is ALOHA? Explain different types of ALOHA
- c) Why do HTTP and FTP run on top of TCP rather than on UDP?
- d) What is classful addressing? Explain difference classes of IP address.
- e) Examine problems in Application Layer.

20

Q. 2 a) Compare OSI and TCP network models

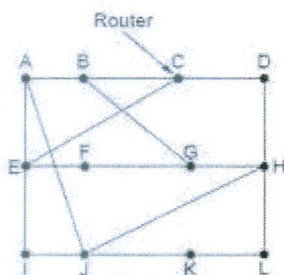
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Q. 2 b) Explain Peer-to-Peer Communication architecture.

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Q. 3 a) Create new routing table for node J using DVR

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To	A	I	H	K
A	0	24	20	21
B	12	36	31	28
C	25	18	19	36
D	40	27	8	24
E	14	7	30	22
F	23	20	19	40
G	18	31	6	31
H	17	20	0	19
I	21	0	14	22
J	9	11	7	10
K	24	22	22	0
L	29	33	9	9
JA delay	8	10	12	6
Is				

Vectors received from J's four neighbors

Q. 3 b) List various sliding window protocols. Explain any one in detail.

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Q. 4 a) Justify that the Go-Back-N protocol is good for network communications.

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Q. 4 b) Examine 2D Parity Code for error detection and correction

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Q. 5 a) What is congestion? How it can be avoided? Explain

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Q. 5 b) List different protocols used at the boundary of AS. Explain any one of them in detail.

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Q. 6. Answer any **FOUR** from the following

20

- a) Explain token bucket algorithm
- b) What is carrier sense? Hence, Differentiate between CSMA/CA & CSMA/CD.
- c) List and explain any two framing methods
- d) Explain subnetting. Hence, explain how subnet mask is calculated?
- e) Examine the advantages of LAN, WAN and MAN.

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