Hall Ticket Number :										

Code: 4G151

R-14

III B.Tech. I Semester Supplementary Examinations May 2018

Computer Networks

(Common to CSE & IT)

Max. Marks: 70 Time: 3 Hours

Answer all five units by choosing one question from each unit (5 x 14 = 70 Marks)

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UNIT–I

1. a) Explain the characteristics of WAN? Why a WAN is required and what objectives are achieved by having a WAN 8M

   b) Distinguish between Wired and Wireless LANs. 6M

OR

2. a) Compare and contract TCP/IP and OSI reference models. 7M

   b) Compare and contract Guided Transmission and Wireless Transmission. 7M

UNIT–II

3. a) Discuss the sliding window protocol in detail. 7M

   b) With an example, illustrate how CRC encoder and decoder will work. 7M

OR

4. a) Explain the working of Carrier Sense Multiple Access protocol. 9M

   b) What kinds of errors can and cannot Vertical Redundancy Check determine 5M

UNIT–III

5. Illustrate the Distance Vector Routing algorithm with a suitable example. What is the serious drawback of Distance Vector Routing algorithm? 14M

OR

6. a) How Random Early Algorithm handles the Congestion problem. 7M

   b) Categorize QoS based on type of network application and what is the impact of QoS on Traffic Shaping. 7M

UNIT–IV

7. a) What are the services provided by the transport layer? Explain various the methods to improve QoS. 7M

   b) Explain TCP proptocol's connection establishment and release. 7M

OR

8. a) Why does UDP exists? How it identifies the destination entities. Justify 7M

   b) What is the role of Bundle Protocol in Transport Layer. Explain with its message format 7M

UNIT–V

9. a) Explain the BitTorrent Protocol used in Application Layer. 7M

   b) Explain the JPEG compression Technique with neat diagrams. 7M

OR

10. a) Compare and contrast H.323 and SIP protocols 7M

    b) Explain the H.323 architectural model for Internet telephony. 7M

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R-14

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III B.Tech. I Semester Supplementary Examinations May 2018

Operating Systems

(Common to CSE & IT)

Max. Marks: 70 Time: 3 Hours

Answer *all five* units by choosing one question from each unit (5 x 14 = 70 Marks)

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UNIT–I

1. a) Illustrate operating systems structure and generation. 5M
   b) Classify different System Programs. 4M
   c) Implement IPC through message queues. 5M

OR

2. a) Describe process state diagram and associated queues with a neat diagram 7M
   b) Distinguish long term, short term and medium term schedulers. 7M

UNIT–II

3. a) Describe thread issues and thread scheduling. 7M
   b) What is critical section problem? Explain its requirements. 7M

OR

4. a) Design an algorithm for solving 2-process critical section problem. 7M
   b) Summarize atomic transactions. 7M

UNIT–III

5. a) What is safe state? Describe how a safe state ensures deadlock avoidance. 7M
   b) Explain paging memory management technique with example. Mention merits and demerits. 7M

OR

6. a) Explore the mechanism of demand paging? 7M
   b) Explain page replacement algorithms with an example. 7M

UNIT–IV

7. a) Write short notes on various Directory structures and their merits, demerits. 7M
   b) Explain layered file system structure 7M

OR

8. a) Summarize tertiary storage structure 7M
   b) What is RAID? Explain various RAID levels. 7M

UNIT–V

9. Explain how I/O requests are transformed to hardware operations 14M

OR

10. a) What are the goals and principles of protection, 7M
    b) Briefly write about program threats and system threats. 7M

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