

B.Sc. I.T. 2015 Sem-III.

31337

SUVARNDURG - III (CBCS - 2015 CORUSE): WINTER - 2016
SUBJECT: DATA NETWORKS

Day: Saturday
Date: 10-12-2016

Time: 10:00 AM TO 1:00 PM
Max. Marks: 60

N.B.:

- 1) Attempt any SIX full questions.
- 2) Figures to the right indicate FULL marks.
- 3) Draw neat and labelled diagrams WHEREVER necessary.

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- Q.1 a) Compare the OSI and TCP/ IP reference models. (05)
b) Draw and explain all network topologies. (05)
- Q.2 a) State and explain various frame types in HDLC. (05)
b) Explain the frame format of PPP. (05)
- Q.3 a) What is CSMA with collision detection? (05)
b) How does the Token Ring LAN operate? (05)
- Q.4 a) Write short note on Network design issues. (05)
b) Write short note on leaky bucket algorithm. (05)
- Q.5 What is sub-netting in IP network? Explain with suitable example. (10)
- Q.6 a) Explain in detail how TCP provides flow control? (05)
b) What is silly window syndrome? Explain its effect and possible solution. (05)
- Q.7 a) Explain methods field in the request line format of HTTP. (05)
b) Explain the following services provided by data link layer: (05)
i) Connectionless unacknowledged service
ii) Connectionless acknowledged service
- Q.8 a) What is TCP and UDP? Explain how you will choose between TCP and UDP? Compare them. (05)
b) A network on the internet has a subnet mask of 255.255.240.0. What is the maximum number of hosts it can handle? (05)

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SUVARNDURG-III (CBCS- 2015 COURSE): WINTER-2016
SUBJECT: OPERATING SYSTEMS

Day: Wednesday
Date: 14-12-2016

Time: 10:00AM TO 1:00P.M.
Max. Marks: 60

N.B:

- 1) Answer ANY SIX full questions.
- 2) Figures to the RIGHT indicate full marks.
- 3) Draw diagrams WHEREVER necessary.

- Q.1 What is a system call? List down different system call related to OS services. (10)
- Q.2 What is a process? Describe the different states of a process with a nest diagram. (10)
- Q.3 Consider the following references string: (10)
1, 3, 3, 2, 5, 4, 5, 4, 1, 4, 2, 5.
Assume number of frames to be 3. Calculate the total number of page faults using LRU algorithm.
- Q.4 What is an operating system? Explain different types of operating system with examples. (10)
- Q.5 What is Interprocess communication? Explain any two IPC mechanism in detail. (10)
- Q.6 Explain with examples, process scheduling algorithms: FCFS, SJF, RR, and Priority. (10)
- Q.7 Define the following: (10)
- a) Logical Address
 - b) Physical Address
 - c) Memory Management Unit
 - d) Turnaround Time
 - e) Throughput
- Q.8 What are Deadlocks in O.S? Explain any two methods for Handling Deadlocks. (10)

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