Course Code: MT-CSE-112
Class: M.Tech (CSE/IT)- 1st Sem.
Title: Data Communications & Computer Network
Assignment Number: 1
Last Dates for Submission: 10th Nov, 2016

Instructions

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HOD within the due date.
3. Write your Name, Programme, and Enrolment No. clearly at the top of the page.

Question 1:

a) How three way handshaking is used in connection establishment and termination in TCP? Explain with suitable diagrams.

b) Compare and contrast Go-back-N ARQ protocol with selective repeat ARQ.

Question 2:

a) What is fragmentation at network layer? Differentiate between the fragmentation processes in IPv4 and IPv6.

b) Assume we have N devices in a network. Calculate and write the number of cable links required for a mesh, ring, bus and star topology.

Course Code: MT-CSE-115
Class: M.Tech (CSE/IT)- 1st Sem.
Title: Programming Practices
Assignment Number: 1
Last Dates for Submission: 10th Nov, 2016

Instructions

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HoD within the due date.
3. Write your Name, Programme and Enrollment No. clearly at the top of page.

Q.1

a) Explain how Scilab is different from Matlab? Also write Scilab code for different operations performed on a matrix.
b) Explain how loops are used in Scilab with the help of an example each.

Q.2

a) What do you understand by dictionary in python? Explain with the help of an example. Also write python code for creating dictionary and to perform operations on dictionary.

b) Explain list in python and write the python code for following operations on list:

1. append
2. extend
3. insert
4. remove
5. index
6. count
7. sort
8. reverse

Course Code: MT-CSE-111
Class: M.Tech (CSE/IT)- 1st Sem.
Title: Advance Data Structure using C++
Assignment Number: 1
Last Dates for Submission: 10th Nov, 2016

Instructions:

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HOD within the due date.
3. Write your name, programme and enrollment number clearly at the top of the Pages.

Question 1

a) What is Algorithm? Explain Asymptotic notation with example.

b) Explain linear and Non-linear data structures?

Question 2

a) Explain stack with example and program.

b) Explain Queue and it's all variant.

Course Code: MT-CSE-113
Class: M.Tech (CSE/IT)- 1st Sem.
Title: Advance DBMS
Assignment Number: 1
Last Dates for Submission: 10th Nov, 2016

Instructions:

1. **Write the responses to the assignment in your own handwriting.**
2. **Submit the responses to your HOD within the due date.**
3. **Write your name, programme and enrollment number clearly at the top of the Pages.**

Question 1:

a) What are joins? Discuss the need of Nested-Loop Joins. Also, Explain Two Pass Algorithms Based on Sorting and Hashing techniques.

b) What are distributed databases? Explain and differentiate between Centralized and non-centralized Databases in detail. Explain the process of query processing in DDBMS with the help of suitable examples.

Question 2:

a) Discuss the Architecture of Object Oriented and Object Relational Databases in detail.

b) Write detailed note on the following:

i) Distributed Commit Protocols: 2PC & 3PC

ii) Distributed concurrency management

iii) Homogeneous and Heterogeneous DDBMS

iv) Data log and Recursion

Course Code: MT-CSE-114
Class: M.Tech (CSE/IT)- 1st Sem.
Title: Advanced Computer Architecture
Assignment Number: 1
Last Dates for Submission: 10th Nov, 2016

Instructions:

1. **Write the responses to the assignment in your own handwriting.**
2. **Submit the responses to your HOD within the due date.**
3. **Write your name, programme and enrollment number clearly at the top of the Pages.**

Question 1

a) Explain the static & dynamic interconnection networks.
b) What are RISC attributes? Discuss the advantages of RISC in comparison with CISC architecture.

Question 2

a) Explain addressing & timing protocols.
b) What are forbidden latencies and initial collision vector?