

Directorate of Distance Education

Assignment Topics

Course: M. Sc IT

SEM: II

RDBMS and Query Languages

C1

1. Describe the role of database system considering its architectural features.
2. Discuss the role of ER Modeling with examples.
3. Explain SQL functions with examples.

C2

1. What are joins? Explain its types in detail.
2. Discuss sequence in detail.
3. What is PL/SQL? Explain different Sections of PL/SQL with syntax and example.

Data communication and computer networking

C1

1. Explain the major disadvantages with the layered approach to protocols.
2. Discuss Network topologies in detail.
3. In detail explain the types of wireless network and its difficulties.

C2

1. What are network address and protocols? Explain.
2. Explain the routing protocols and the properties of router.
3. Discuss Time Division Switching and Space division Switching in detail.

Current operating system and their applications

C1

1. Explain the types of operating system in detail.
2. List out any 30 system calls of Linux operating system and explain their purpose.
3. Discuss the four functions of loaders and explain loader schemes with a neat diagram.

C2

1. Discuss about Semaphore & its implementation.
2. What is thread? Explain its benefits types and model in detail.
3. Explain Swapping and Paging in detail.

Object Oriented Programming in C++ and JAVA

C1

1. Explain the various special operators in C++.
2. Compare and Contrast normal function and inline function.
3. Explain the different types of constructions with suitable examples.

C2

1. Write a class template by name Vector and perform the following:-
 - a. Find the smallest of the element in the vector
 - b. Search for an element in the Vector.
2. Develop a Program to draw traffic signals.
3. Write a JAVA Program to illustrate hybrid and hierarchical inheritance.

Probability and Statistics

C1

1. Write the pmf and parameters of all discrete distributions discussed. Also write the expressions for CDF, mean and variance.
2. What are point estimates? Discuss the types of point estimates in details with illustrations.
3. Discuss the $r \times c$ contingency table (contents and utility).

C2

1. Discuss the general approach of likelihood ratio test.
2. How will you test the significance of population correlation coefficient?
3. What is MLR? Why is it needed in most business scenarios? How is it different from SLR models?

Multimedia Technologies

C1

1. Explain the different video standards which are in use for video broadcasting and write the use of OCR.
2. How a computer is a versatile machine with respect to different types of devices? Explain in detail.
3. Discuss the image file formats and when to use each type of file? Explain with examples.

C2

1. Write an essay on compression algorithm.
2. Write a detailed essay on sampling, quantization, coding and companding.
3. Make survey and write a report on the multimedia transmission technologies.

ERP

C1

1. Discuss business Re-engineering with a neat diagram in detail.
2. Explain Vendor and consultants in detail.
3. Discuss about Financial in detail.

C2

1. Discuss the various functions of Enterprise controlling.
2. Explain the order and shipping process with a neat Sketch.
3. What are facilities offers by web-enabled services? Explain in detail.

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Assignment Topics

Course: M. Sc IT

SEM: I

Computer organization and Architecture

C1

1. (a) Explain in detail the generations of computers.
(b) Discuss von-neumann Architecture with a neat Labeled diagram.
2. Discuss micro operations and their types in detail with examples and with a neat labeled diagram.
3. Explain all the addressing modes in details with a neat labeled diagram.

C2

1. Discuss Logic gates in detail with a neat diagram.
2. (a) Describe Parallel Processing.
(b) Explain Flynn classification in detail with a neat diagram.
3. Explain wearable computers in detail.

Problem solving and programming in 'C'

C1

1. (a) What is an identifier ? Mention the rules to be followed while forming identifiers.
(b) Why a variable is to be declared.
2. (a) Differentiate between prefixing and suffixing ++ to a variable.
(b) Give an account on short and arithmetic assignment operators.
3. Write a program to generate multiplication table of number using a function.

C2

1. Write a program to sort each column of a Matrix.
2. Compare and contrast top down bottom up and modular approaches.
3. Create an employee database consisting of Name ENO Basic DA,HRA,TAX<Loan and compute total deduction gross salary and Net salary using files.

Data Structures and Algorithms

C1

1. Discuss various memory management functions with syntax and examples.
2. Discuss different types of linked list with examples.
3. Explain the recursive in order, preorder and post order traversal of a binary tree in linked representation.

C2

1. Discuss the operations and types of queues with suitable algorithms.
2. Discuss about analysis of algorithms and notation of programs in detail.
3. Device an algorithm to sort 'n' numbers using merge sort technique.

Discrete Mathematics

C1

1. Discuss De – Morgan's law and distributive properties.
2. Explain WFF that are tautologies and contradictions in detail.
3. Draw the digraphs and Hasse diagrams for following sets with the relation divides (2,6,24)
(1,3,5,15) (1,2,3,6,12)(3,6,12,36,72)(1,2,3,4,5,6,10,12,24)

C2

1. Let $A = \{a,b,c,d\}$ $B = \{1,3,6,8\}$ Define any relations from A and B that are functions and three relations that are not functions. Explain the reasons clearly.
2. Determine whether the set of even integers with the binary operations $x*y = xy/2$ forms a semigroup or a monoid.
3. Complete graphs will have hamiltonian circuits , justify this statement. Find the number of Hamiltonian circuits.

Computer Graphics

C1

1. What are the various Graphic Display Devices? Explain each in detail.
2. Discuss different attributes of line in detail.
3. How can you convert a unit square into a parallelogram about x-direction and y-direction shear matrix? Discuss with suitable example.

C2

1. What is clipping? Explain its primitive types.
2. Discuss Bezier Curves in detail.
3. Explain geometric transformations in detail.

Internet Technology

C1

1. Explain the layers of OSI reference model with a neat labeled diagram.
2. Write a HTML program to build your resume.
3. Explain Sub netting in IPv4 and IPV6.

C2

1. Explain Domain Names and the Registration process.
2. Discuss the Architecture of ISP Application.
3. Explain the outlook com pop secure settings.

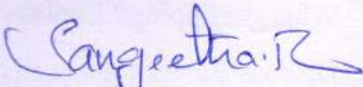
E-Commerce

C1

1. Discuss advantages, disadvantages and challenge of E-commerce.
2. What are primary E-commerce models? Explain each with a neat Labeled diagram.
3. Explain the major steps in E-commerce website development.

C2

1. Explain Barter system in detail with examples.
2. Discuss Digital signature and E-governance in detail.
3. What is CRM and E – CRM ? Explain in details.


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