First Internal Exam Syllabus - May 2021

SEM - II - B. TECH. CSE (CBA/CS/BDA)

2HS102 - Linear Algebra (DSD)

- Basic definition of special matrices and other properties
- Determinants and its properties
- Rank of Matrix
    - Using Minor
    - Converting to normal form
- Finding Inverse using Gauss-Jordan Method and adjoint method
- Solution of Non-Homogeneous Linear system of equations
- Solution of Homogeneous Linear system of equations
- Consistency test for both homogeneous and non homogeneous system of Linear equations

Text Book :
Higher Engineering Mathematics - By B S Grewal

2CSE201 - Aptitude Skill Building (TRK)

Unit 1 Basics of Quantitative Abilities
Problems on Number System
Problems on HCF and LCM
Problems on Average
Problems on Ratio and Proportion
Problems on Percentage
Unit 2 Arithmetic Quantitative Abilities
Problems on Ages

2CSE202 - Basics of Communication Systems (DRS)

Introduction
Data Communications, Networks, Data Representation, Data Flow, Distributed Processing, Network Criteria, Physical Structures, Network Models, Categories of Networks, Intranet, The Internet, Protocols and Standards, Components of computer network (Repeater, Hub, Switch, Bridge, Router), Gateway
Network Models
Layered Tasks, Sender, Receiver and Carrier Hierarchy, The OSI Model, Layers in the OSI Model, TCP/IP Protocol suit, Addressing – Physical, Logical, Port and Specific Addresses

Data and Signals

Analog and Digital Signals, Periodic and Non-periodic Signals, Sine Wave, Phase, Wavelength, Time and Frequency Domains,

Basics of IP Addressing

IPV4, Subnet Mask, Network IP

2CSE203 - Essential of Software Foundation & Programming-II (PNJ)

Introduction to dynamic memory allocation

C programming basics, dynamic memory allocation functions

Introduction to OOP

What is object-oriented programming? Why do we need object oriented, Programming characteristics of object-oriented languages, C and C++.

C++ Programming basics

Output using cout Directives. Input with cin, type bool,the setw manipulator, type conversions.

Object and Classes

Making sense of core object concepts (Encapsulation, Abstraction, Polymorphism, Classes, Messages Association, Interfaces) Implementation of class in C++, C++ Objects as physical object, C++ object as data types constructor. Object as function arguments. The default copy constructor, returning object from function. Structures and classes. Classes objects and memory static class data. Const and classes

Arrays

Arrays as class member data, Arrays of object

Forms of Polymorphism

Overloading unary operations. Overloading binary operators, data conversion, pitfalls of operators overloading and conversion keywords,inline function ,function overloading, Explicit and Mutable

2CSE205 - Computer Organization (UJS)

Introduction to Computer Organization and Architecture(Chap-1)

Introduction to Computer Architecture viz. – Harvard, Von Neumann Architecture,
Basic Computer Organization : Registers and Bus

Register Transfer and Micro operations(Chap-4 from book)

Register Transfer Language
Register transfer
Bus and Memory transfer,
Arithmetic Micro operations,
Logic Micro-operations,
Shift Micro operations,
Arithmetic Logic Shift Unit

Basic computer organization(Chap-5 from book)

Instruction codes,
Computer registers,
computer instructions,
Timing and Control
,Instruction cycle,
Memory-Reference Instructions,

Input-output and interrupt,
Complete computer description
Note:- refer assignment, exercise from book