

Biotechnology:

1. Bio Chemistry I
2. Enzyme Science and Engineering

Civil Engineering:

1. Civil Engineering – Building Materials and Construction
2. Engineering Geology
3. Environmental Air Pollution
4. Fluid Mechanics
5. Foundation Engineering
6. Hydraulics
7. Introduction to Transportation Engineering
8. Mechanics of Solids
9. Modern Surveying Techniques
10. Pre-stressed Concrete Structures
11. Soil Mechanics
12. Strength of Materials
13. Structural Analysis II
14. Surveying
15. Transportation Engineering II
16. Water and Waste Water Engineering
17. Water Resources Engineering

Computer Science and Engineering:

1. Artificial Intelligence (IIT,K Prof. Anupam Basu)
2. Artificial Intelligence (IIT,K Prof.P.Dasgupta)
3. Computer Architecture
4. Computer Graphics (IIT,D Prof. Prem K Kalra)
5. Computer Graphics (IIT,M Prof.Sukhendu Das)
6. Computer Networks
7. Computer Organization
8. Data Communication
9. Data Structures and Algorithms
10. Database Design
11. Design and Analysis of Algorithms
12. Discrete Structures
13. Internet Technology
14. Introduction to Problem Solving and Programming

15. Operating System
16. Principles of Programming Languages
17. Software Engineering
18. System Analysis and Design

Core Sciences (For Semester I & II):

1. Basic Electronics and Lab
2. Classical Physics
3. Concept of Management and Evolution of Management thought
4. Engineering Chemistry I
5. Engineering Mechanics
6. Engineering Physics II
7. Material Science
8. Mathematics I
9. Mathematics II
10. Mathematics III
11. Numerical Analysis and Computer Programming
12. Physics I – Oscillations & Waves
13. Quantum Physics

Electronics & Communication Engineering:

1. Adaptive Signal Processing
2. Basic Electronics
3. Broadband Networks: Concepts and Technology
4. Communication Engineering
5. Digital Circuits and Systems
6. Digital Communication
7. Digital Computer Organization
8. Digital Image Processing
9. Digital Signal Processing
10. Digital Systems Design
11. Digital Voice & Picture Communication
12. Electronics for Analog Signal Processing – I

13. Electronics for Analog signal Processing – II
14. High Speed Devices and Circuits
15. MEMS and Microsystems
16. Neural Networks and Applications
17. Probability and Random Processes
18. Solid State Devices
19. Transmission Lines and EM Waves
20. VLSI Circuits
21. VLSI Design
22. Wireless Communication

Electrical Engineering:

1. Analog ICs
2. Basic Electrical Technology
3. Chaos, Fractals & Dynamic Systems
4. Circuit theory
5. Control Engineering
6. Digital Integrated Circuits
7. Digital Signal Processing
8. Dynamics of Physical Systems
9. Electromagnetic Fields
10. Embedded Systems
11. Energy Resources & Technology
12. Estimation of Signals and Systems
13. Illumination Engineering
14. Industrial Automation and Control
15. Industrial Drives – Power Electronics
16. Industrial Instrumentation
17. Intelligent Systems and Control
18. Networks and Systems
19. Networks Signals and Systems
20. Power Electronics
21. Power System Generation, Transmission and Distribution
22. Power Systems Analysis
23. Power System Operation and Control

Mechanical Engineering:

1. Advanced Finite Elements analysis
2. Advanced Strength of Materials
3. Computer Aided Design and Manufacturing
4. Design of Machine Elements I
5. Dynamics of Machines
6. Finite Element Method
7. Fundamentals of Operation Research
8. Heat and Mass Transfer
9. Industrial Engineering
10. Introduction to Finite Element Method
11. Kinematics of Machines
12. Manufacturing Processes I
13. Manufacturing Processes II
14. Mechanical Measurements and Metrology
15. Principles of Mechanical Measurements
16. Project and Production Management
17. Refrigeration and Air Condition
18. Robotics
19. Strength of Materials

Mining Engineering:

1. Fundamentals of Environmental Pollution and Control

Ocean Engineering:

1. Performance of Marine Vehicles at Sea
2. Strength and Vibration of Marine Structures