

SDSC SHAR Scientist Syllabus || Download SDSC SHAR Scientist/ Engineer Exam Pattern

SDSC SHAR Scientist Exam Pattern

Exam Type	Subjects	No. of Questions	Maximum Marks	Duration
Objective	Engineering disciplines	80	240	90 Minutes
Total		80	240	

SDSC SHAR Scientist Syllabus

Chemical Engineering:

1. Catalysis and Reactions
2. Biomolecular Engineering
3. Cellular Engineering
4. Computing and Simulation
5. Nanotechnology
6. Materials
7. Polymers and Complex Fluids
8. Sustainable Energy
9. Microfabricated Systems

Mechanical:

1. The Strength of Materials
2. Theory of Machines
3. The design of Machine Elements
4. Metal Casting
5. Inventory Control
6. Production Planning and Control
7. Manufacturing Analysis
8. Tool Engineering
9. Forming Processes

10. Joining Processes
11. Operations
12. Metrology and Inspection
13. Turbomachinery
14. Probability and Statistics
15. Differential equations
16. Engineering Mechanics
17. Metrology and Inspection
18. Refrigeration and air-conditioning
19. Thermodynamics

Electrical:

1. Power Systems
2. Switch Gear and Protection etc
3. Electromagnetic Theory
4. Analog and Digital Electronics
5. Electronics Devices
6. Electrical Instrumentation.
7. Utilization of Electrical Energy
8. Network Analysis
9. Electrical Machines
10. Control Systems
11. Power System Analysis & Control
12. Power System Protection
13. Power Electronics & Drives

Electronics:

1. Digital electronic circuits
2. Wide banding circuits
3. Microwave Engineering
4. Electromagnetic Theory
5. Small signal analysis
6. Frequency
7. Power Amplifiers
8. Network Theory Control Systems
9. Signals and Systems
10. Analog electronic circuits

Civil:

1. Estimating, Costing, and Valuation.
2. Environmental Engineering.
3. Structural Engineering
4. Theory of Structures.
5. RCC Design
6. Steel Design.
7. Concrete Technology.
8. Building Materials.
9. Surveying.
10. Transportation Engineering.
11. Soil Mechanics.
12. Hydraulics.
13. Irrigation Engineering.

Medical Officer:

1. Pediatrics
2. Pathology
3. Pharmacology
4. Physiology
5. Radio Diagnosis
6. Medicine
7. Microbiology
8. O&G
9. Ophthalmology
10. Orthopedics