GROUP-4

Computer Engineering Jobs (Level- Matric+ Dip. in Computer Engineering)

1) General awareness, Reasoning, Mathematics, Science, History including Haryana related history, current affairs, literature, Geography, Civics, Environment, Culture etc.-   **(Weightage 20%)**

2) Computer terminology, Fundamentals, word software, excel software, Power point, internet, web browsing, Communication, emails, downloading and uploading data on websites etc**.** -

(Weightage 10%)

3) Subject related syllabus-   **(Weightage 70%)**

A) PROGRAMMING IN C

1**.**   Algorithm and Programming Development
2.   Program Structure
3.   Control Structures
4   Pointers
5.   Functions
6.   Arrays and Strings
7.   Structures and Unions

B) OPERATING SYSTEMS

1.   Overview of Operating Systems

2.   Process Management (Principles and Brief Concept)

3.   Deadlocks (Principles and Brief Concept)

4.   Memory Management Function (Principles and Brief Concept)

5.   I/O Management Functions (Principles and Brief Concept)

6.   File Management (Principles and Brief Concept)

7.   Linux Operating System

C)DIGITALELECTRONICS

1.   Introduction
2.   Number System
3.   Codes and Parity
4.   Logic Gates and Families
5.   Logic Simplification
6.   Arithmetic circuits
7.   Decoders, Multiplexers, De Multiplexers and Encoder
8.   Latches and flip flops
9.   Counters
10.   Shift Register

11.   A/D and D/A Converters

12.   Semiconductor Memories

D) MULTIMEDIA APPLICATIONS

1.   Introduction to Multimedia Systems
2.   Content and Project Planning, Designing and development
3.   Using Image Processing Tools
4.   Multimedia Authoring Tools

E) DATA COMMUNICATION

1.   Introduction
2.   Data and Signals
3.   Digital and Analog Transmission
4.   Multiplexing – FDM, WDM, TDM

5. Transmission media
6. Error Detection and Correction

F) DATA STRUCTURES USING C

1. Fundamental Notations

2. Arrays

3. Linked Lists

4. Stacks, Queues and Recursion

5. Trees

6. Sorting and Searching

G) OBJECT ORIENTED PROGRAMMING USING JAVA

1. Introduction and Features
2. Language Constructs
3. Classes and Objects
4. Inheritance
5. Polymorphism
6. Abstract class & Interface
7. Exception Handling

H) COMPUTER   ORGANIZATION
1. Hardware organization of computer system
2. Memory organization
3. I/O organization
4. Architecture of multi-processor systems

I) MICROPROCESSORS AND PERIPHERAL DEVICES

1. Evolution of Microprocessor

2. Architecture of a Microprocessor (With reference to 8085 microprocessor)

3. Instruction Timing and Cycles

4. Programming (with respect to 8085 microprocessor)

5. Memories and I/O interfacing

6. Interrupts

7. Data Transfer Techniques

8. Peripheral devices

9 Architecture of 8086 Microprocessor

J) DATABASE MANAGEMENT SYSTEM
1. Introduction
2. Database System Concepts and Architecture
3. Data Modeling using E.R. Model (Entity Relationship Model)
4. Relational Model:
5. Normalization
6. Database Access and Security
7. MYSQL/SQL (Structured Query Language)

K) SOFTWARE ENGINEERING

1. Introduction to Software Engineering
2. Software Life Cycle Models
3. Software Planning
4. Requirement Analysis and Specification
5. Software Design and Implementation

6. Software Testing

L) COMPUTER NETWORKS

1.   Networks Basics
2.   Networking Models
3.   TCP/IP Addressing
4.   Network Architecture
5.   Network Connectivity
6.   Network Administration
7.   Introduction to Wireless Networks.
8.   Cloud Computing

M) COMPUTER PROGRAMMING USING PYTHON

1.   Introduction
2.   Basic Python Syntax
3.   Language Components
4.   Collections
5.   Functions
6.   Modules
7.   Exceptions
8.   Input and Output
9.   Classes in Python
10.   Regular Expressions

N) WEB DEVELOPMENT USING PHP

1.   DEVELOPING PORTALS USING HTML
2.   PHP
3.   PHP and MySQL

O) NETWORK SECURITY

1.   Introduction

2.   Securing Data over Internet

3.   Virus, Worms and Trojans

4.   Firewalls

5.   Intrusion Detection System (IDS)/IPS

6   Handling Cyber Assets- Configuration policy as per standards, Disposable policy

7.   Virtual Private Network (VPN)

8.   Disaster and Recovery

P) MOBILE APPLICATION DEVELOPMENT

1.   Introduction to Mobile Computing, Wi-Fi, Bluetooth
2.   Introduction to GSM, SMS, GPRS, Mobile OS
3.Introduction to ANDROID
4.   Views
5.   Location Based Service and SQLite

Important Note: The Weightage as mentioned against the syllabus is tentative & may vary.