Q.1 Multiple Choice Questions:

1. Which device is used in 1st Generation of Computers?
   a. Vacuum Tube       b. Transistor
   c. IC                d. Silicon Chip

2. Which one of the following is not Hardware?
   a. Key Board       b. CPU
   c. ROM            d. MS-Word

3. The Binary value of Hexadecimal F is ________?
   a. 1111         b. 1110
   c. 1100         d. 1101

4. Which is the example of System Software?
   a. Payroll System b. Reservation System
   c. Medical Store System d. Operating System

5. Which one of the following is Binary of Decimal 5?
   a. 010          b. 100
   c. 110         d. 101

6. The Hamming distance of 100101 and 101011 is ________.
   a. 2          b. 3
   c. 4          d. 5

7. Which of the following Command is used for Pattern Searching?
   a. Sort          b. Search
   c. Grep         d. Cat

8. Which of the following Command is display current Username?
   a. Who          b. User
   c. Who am i    d. Who are u

9. Heart of the Unix system is ____________.
   a. Hardware       b. Kernel
   c. Shell           d. Application

10. In E-R model E means__________.
    a. Equally          b. entity
    c. End              d. Escape
Q.2 Explain any Ten

1. What is Software? Give examples.
2. What is Hardware? Give examples.
3. Define Binary Number System.
4. Perform: \((10010)_2 + (01001)_2 = (\_\_\_\_\_\_\_\_)_2\).
5. Perform: \((100101)_2 - (001010)_2 = (\_\_\_\_\_\_\_\_)_2\).
6. List out Features of Unix system.
7. Explain LS command.
8. What is Foreign Key?
9. List out advantages of DBMS.
10. How we create and Remove Directory in Unix?
11. Write Full form of ASCII.
12. Explain Entity in E-R Model.

Q.3 A. What is Computer? Draw the block diagram of Computer? Explain its different functional units in detail.
B. Write Seven Steps of Instruction Execution cycle

OR

Q.3 Perform the following:
1. \((8636)_{10} = (\_\_\_\_\_\_\_)_2\)
2. \((A3D)_{16} = (\_\_\_\_\_\_\_)_{10}\)
3. \((5430)_{8} = (\_\_\_\_\_\_\_)_{10}\)
4. \((763.25)_{10} = (\_\_\_\_\_\_\_)_{8}\)

Q.4 A. What is Hamming Code? Find the Hamming code of \((128)_{10}\) using odd parity.
B. Explain Register Addressing in detail

OR

Q.4 A. What is Hamming Code? Find the Hamming code of \((256)_{10}\) using even parity.
B. Explain ASCII in detail.

Q.5 Explain Grep Command with syntax, Options and Example.

OR

Q.5 Explain Sort and Cat command with Syntax and Example.

Q.6 A. Explain database Components in detail.
B. Explain HDM(Hierarchical data model in detail).

OR

Q.6 A. Explain Database Organization in Detail.
B. Explain three Types of relationship in detail.