

# NEB Exam- Important Questions for Computer Science Grade-XII

## Unit-1- Database Management System

- 8 Marks

1. What is Database and DBMS? List out the advantages and disadvantages of DBMS.
2. Explain the different models of DBMS with advantages and disadvantages.
3. Write differentiate between centralized and distributed database systems.
4. Who is DBA? What are the major responsibilities of DBA?
5. What is normalization? Explain the normalization process with examples.
6. Define the following terms.  
a) Data Dictionary      b) **Primary Key**      c) Relationship      d) DML  
e) **SQL**      f) **Data Integrity**      g) DDL      h) **Data Security**      i) **Database System**

## Unit-2- Data Communication and Networking

- 9 Marks

1. What is Computer Network? Explain advantages and disadvantages of a computer network.
2. Discuss different types of computer networks on the basis of size.
3. What do you mean by network topology? Explain the different types of network topologies.
4. Differentiate between LAN and WAN.
5. Define network architecture. Differentiate between client-server and peer-to-peer networks.
6. Differentiate between Simplex, Half Duplex, and Full Duplex.
7. Differentiate between the internet and intranet.
8. What is Internet addressing? Discuss Network Tool.
9. What do you mean by transmission media? Explain the different types of transmission media used in computer networks?
10. What do you mean by the OSI reference model? Explain the different layers of the OSI reference model.
11. Define the following terms: a) Repeater      b) **Bridge**      c) Protocol      d) **Router**      e) **Satellite**      f) **Microwave**  
System      g) subnet Mask      h) **MAC address**      i) **Coaxial Cable**      j) **Fiber Optic Cable**

## UNIT-3- Web Technology II

- 8 Marks

1. What is web technology? Explain different data types used in JavaScript.
2. Differentiate between client-side scripting and Server-side scripting.
3. What is event handling in JavaScript? Give one example.
4. What is JQuery? Write its features and Write a program to display a message "Hello Class 12" using JQuery.
5. What is JavaScript? How can you add JavaScript to an HTML page? Describe with an example.
6. What is jQuery? Write its features.
7. What is JavaScript function? Explain with calling function examples.
8. What is PHP? Write the advantages of PHP.
9. Explain the different operators used in PHP.
10. What are the features of PHP? Write a PHP program to display the largest among three numbers.
11. Define SQL? Write down the SQL queries to create a database, create a table in the database, insert data in the table, and query the data to display it.
12. Write down the server-side script to create a database, connect with it, create a table and insert data in it.

## Practical Programs

1. Write a JavaScript to display 1 to 10 using for loop, while loop, and do-while loop.
2. Create a Page with a button with the value "Computer" on clicking the button your page should be " Computer Science".
3. Write a JavaScript program to display "Welcome Class-12" using the onload event.
4. Design a form with username, address, e-mail, password, and submit button. Validated the form using jQuery.
5. Design a form with username and password and submit button. Write a PHP code to get value of username and password using a) `$_POST` variable and b) `$_GET` variable.
6. Write a PHP program to check if a string is a palindrome or not.
7. Write a JavaScript program to calculate the factorial of a given number.
8. Write a javascript program to input three numbers and find the largest one using java and PHP.

## Unit-4- Programming in C

- 8 Marks

- 1.) What is C? Write its Features.
- 2.) What are the advantages and disadvantages of C programming Languages?
- 3.) What is a Data type? Explain the type of data with examples.
- 4.) What is a variable? Explain its types.
- 5.) What is an operator? Write its types and explain any four of them.
- 6.) What is a control structure? Write a difference between break and continue statements with examples.

- 7.) What is looping? Write the difference between while and Do while loop with examples.
- 8.) Define the term array. What is the string? Explain any four-string handling function for example.
- 9.) What are the functions? Write its features and describe its types.
- 10.) What is the recursion technique? Explain with one example.
- 11.) **What is the concept of storage? Differentiate between automatic storage and external storage.**
- 12.) What is a Structure? Explain with one example.
- 13.) Differentiate between array and structure.
- 14.) Differentiate between structure and union.
- 15.) Differentiate between array and pointer.
- 16.) Define the terms call by value and call by reference with examples.
- 17.) **What is a pointer? Explain with examples.**
- 18.) Differentiate between Structure and Pointer.
- 19.) Differentiate between sequential access and random access techniques of data file.
- 20.) Differentiate between fprintf and fscanf function.

#### IMP Selected C Programs

1. Write a program to input any three numbers and find out which one is the largest numbers.
2. Write a program to display day using the switch statement depending upon the number entered. i.e. input 1 for Sunday, 7 for Saturday.
3. Write a program to input a number and check whether it is prime or not.
4. Write a program to display the sum of even and odd numbers from 1 to 50.
5. Write a program to accept the age of 10 different employees and count the number of employee.
  - a. Whose age is more than or equal to 60
  - b. Whose age is less than 35
6. Write a program to enter elements for 3x3 matrixes and Display its sum.
7. Write a program to accept 10 different numbers in an array and sort them in descending order.
8. Write a program to input a number and find out whether that number is palindrome or not.
9. Write a program to input the names of N numbers of students and sort them in alphabetical order.
10. Write a program to read a number and make the sum of individual digits and print using the recursion technique.
11. Write a program that reads different names and address into the computer and rearrange the names into alphabetical order using the structure variables.
12. Write a program to read N students' records store them in a data file and display the content in appropriate format by using fprintf and fscanf function.

#### Unit-5- Object-Oriented Programming (OOP)

- 6 Marks

- 1) **What is OOP? Describe its features.**
- 2) **What are the advantages and disadvantages of using OOP?**
- 3) Explain the term polymorphism and inheritance.
- 4) **Difference between OOP and Structured Programming Language.**
- 5) Explain the Class, Object, and Encapsulation.

#### Unit-6- Software Development Model

- 6 Marks

1. What is SPM? Explain the major activities of the Software Development Process in brief.
2. **What is Software Development Model? Explain the types of SDM with advantages and disadvantages.**
3. **Who is the system analyst? Explain the role and characteristics of a system analyst.**
4. Explain in detail waterfall, prototyping, and spiral models of software development.
5. What is prototyping? Write down its advantages and disadvantages.
6. **Define SDLC. Explain different phases of SDLC in brief.**
7. **What do you mean by feasibility study? Why is it necessary before designing a system?**
8. Define system testing. Differentiate between black box testing and white box testing.
9. **What is the algorithm and flowchart? Write the difference between a system and a program flowchart.**
10. Differentiate between System analysts and System engineers.
11. Define the following terms. A) **DFD** B) **ER diagram** C) Case diagram D) UML E) System Flowchart  
F) **Documentation** G) Algorithm H) Pseudocode I) Decision table and decision tree J) **Prototyping model**  
K) **Spiral Model**

#### Unit-7- Recent Trends in Technology

- 5 Marks

- 1) **What do you mean by AI?** How does it affect modern society?
- 2) **Explain the concept of Big Data and Its types.**
- 3) What is Big data? Write its application.
- 4) **What is E-commerce? Write down its advantages.**
- 5) **What is mobile computing? Write its features.**
- 6) Define the following terms: a) **M-commerce** b) Robotics c) E- Learning d) **Virtual Reality**  
e) **Social Media** f) **IOT** g) **E-governance** h) **Cloud computing**