Sahibganj College ,Sahibganj

Department of BCA

Assignment Question for BCA Semester –II

Subject : Java programming Paper : Core-III

Question 1: What are the differences between C++ and Java?

Question 2: List the features of Java Programming language.

Question 3: What are the various access specifiers in Java?

Question 4: What is the Inheritance? and explain its types

Question 5 :Write a program to calculate the sum of first 10 natural number.

Question 6 :Write a program that prompts the user to input a positive integer. It should then print the multiplication table of that number.

Question 7 :Write a program to find the factorial value of any number entered through the keyboard.

Question 8 :Two numbers are entered through the keyboard. Write a program to find the value of one number raised to the power of another. (Do not use Java built-in method)

Question 9 :Write a program that prompts the user to input an integer and then outputs the number with the digits reversed. For example, if the input is 12345, the output should be 54321.

Question 10 :Write a program that reads a set of integers, and then prints the sum of the even and odd integers.

Question 11: Write a program that prompts the user to input a positive integer. It should then output a message indicating whether the number is a prime number.

Question 12 : Write a program to calculate HCF of Two given number.

Question 13: Write a do-while loop that asks the user to enter two numbers. The numbers should be added and the sum displayed. The loop should ask the user whether he or she wishes to perform the operation again. If so, the loop should repeat; otherwise it should terminate.

Question 14 : Write a program to enter the numbers till the user wants and at the end it should display the count of positive, negative and zeros entered.

Question 15 : Write a program to enter the numbers till the user wants and at the end the program should display the largest and smallest numbers entered.

Question 16 : Write a program to print out all Armstrong numbers between 1 and 500. If sum of cubes of each digit of the number is equal to the number itself, then the number is called an Armstrong number.

For example, 153 = (1 * 1 * 1) + (5 * 5 * 5) + (3 * 3 * 3)

Question 17 : Write a program to print Fibonacci series of n terms where n is input by user :

0 1 1 2 3 5 8 13 24 .....

Question 18 : Write a program to calculate the sum of following series where n is input by user.

1 + 1/2 + 1/3 + 1/4 + 1/5 +.....1/n

Question 19 : Compute the natural logarithm of 2, by adding up to n terms in the series

1 - 1/2 + 1/3 - 1/4 + 1/5 -... 1/n

where n is a positive integer and input by user.

Question 20 : Write a program that generates a random number and asks the user to guess what the number is. If the user's guess is higher than the random number, the program should display "Too high, try again." If the user's guess is lower than the random number, the program should display "Too low, try again." The program should use a loop that repeats until the user correctly guesses the random number.

Question 21 :

Write a program to print following :

i)

****

****

****

****

ii)

*

**

***

****

*****

iii)

  *

```
  **
 ***
****
*****
```

iv)

```
   *
  ***
 *****
*******
*********
```

v)

```
      1
     222
    33333
  4444444
555555555
```

vi)

```
      1
     212
    32123
```

4321234

543212345

Question 22 : Write a program to compute sinx for given x. The user should supply x and a positive integer n. We compute the sine of x using the series and the computation should use all terms in the series up through the term involving xn

sin x = x - x3/3! + x5/5! - x7/7! + x9/9! .....

Question 23 : Write a program to compute the cosine of x. The user should supply x and a positive integer n. We compute the cosine of x using the series and the computation should use all terms in the series up through the term involving xn

cos x = 1 - x2/2! + x4/4! - x6/6! .....

Question 24 : Explain following Terms :- JVM , JRE ,JDK.

Sahibganj College ,Sahibganj

Department of BCA

Assignment Question for BCA Semester –II

Subject : Discrete Structures Paper : Core-IV

Question 1: What is graph and explain its types.

Question 2: Explain different types of representation of graph.

Question 3: explain Isomorphism Graph with suitable example.

Question 4: Explain Euler and Hamiltonian Paths and circuits with suitable example.

Question 5: Explain Planar graph with suitable example.

Question 6: what is Tree and explain its terminology.

Question 7: Explain following terms :-

a) **Logical connectives**
b) **Well formed formulas**
c) **Tautologies**
d) **Equivalences**
e) **Inference Theory**

****

Sahibganj College ,Sahibganj

Department of BCA

Assignment Question for BCA Semester –IV

Subject : Design and Analysis of Algorithms Theory

Paper : Core –VIII

Question 1: Explain Basic Design and Analysis techniques of Algorithms, Correctness of Algorithm.

Question 2: Explain Algorithm Design Techniques.

Question 3: Explain following Sorting techniques–Bubble Sort, Insertion Sort, Merge Sort

Question 4:Expalin Searching Techniques, Medians & Order Statistics, complexity analysis

Question 5: Define Decision Trees with Suitable example.

Question 6: Explain Breadth First Search and Depth First Search with suitable example.

Question 7: Explain Minimum Spanning Trees with suitable example.

Sahibganj College ,Sahibganj

Department of BCA

Assignment Question for BCA Semester –IV

Subject : Software Engineering

Paper : Core –IX

Question 1: Explain Characteristics of Software Engineering.

Question 2: Explain the Role of Software Engineering.

Question 3 : Explain Software Development Life Cycle (SDLC) with diagram.

Question 4: Explain Capability Maturity Model Integration (CMMI).

Question 5: Explain Software Engineering Model.

Question 6: Explain Characteristics of Software Requirement analysis .

Question 7: Define Characteristics and Components of SRS.

Question 8: Define Estimation in Project Planning Process.

Question 9: Explain Risk Identification and Risk Projection.

Question 10: Explain RMMM Plan.

Question 11: Explain Software Quality Assurance.

Sahibganj College ,Sahibganj

Department of BCA

Assignment Question for BCA Semester –IV

Subject : Database Management Systems

Paper : Core –IX

Question 1: What is database and explain different types of database model.

Question 2: Explain basic Structure of Oracle System.

Question 3: **What are the three levels of data abstraction.**

Question 4: Explain different types Database Language .

Question 5: what is normalization and its types.

Question 6: **Explain ACID properties.**

Question 7: **Describe the types of keys?**

Question 8: Writes short notes :- a. UML b. Specialization c. Generalization d. BCNF

Question 9. Write the sql commands for (1) to (7) on the basis of the table Family .

No	Name	FemaleMembers	MaleMembers	Income	Occupation
1	Mishra	3	2	70000	Service
2	Gupta	4	1	50000	Business
3	Khan	6	3	80000	Mixed
4	Chaddha	2	2	25000	Business
5	Yadav	7	2	20000	Mixed
6	Joshi	3	2	14000	Service
7	Maurya	6	3	5000	Farming
8	Rao	5	2	10000	Service

1) **To select all the information of the family whose occupation is service.**
2) **To list the name of family where female members are more than 3.**
3) **To list all names of the family with income in ascending order.**
4) **To display family's name ,malemembers and occupation of business family.**
5) **To count the number of families whose income is less than 10,000 .**

6) **To insert a new record in the family table with the following data: (9'Dsouza' , 2,1, 15000,'service').**

7) **Give the output of the following sql command:**

i) **Select MIN(Distinct Income) from Family;**

ii) **Select MIN(FemaleMembers) from family where occupation='Mixed';**

iii) **Select SUM(Income) from family where occupation='Service';**

iv) **Select AVG(Income) from Family;**

10. Create and use the following database schema to answer the given queries. EMPLOYEE Schema

Field	Type	NULL	KEY	DEFAULT
Eno	Char(3)	NO	PRI	NIL
Ename	Varchar(50)	NO		NIL
Job_ type	Varchar(50)	NO		NIL
Manager	Char(3)	Yes	FK	NIL
Hire_date	Date	NO		NIL
Dno	Integer	YES	FK	NIL
Commission	Decimal(10,2)	YES		NIL
Salary	Decimal(7,2)	NO		NIL

DEPARTMENT Schema

Field	Type	NULL	KEY	DEFAULT
Dno	Integer No	No	PRI	NULL
Dname	Varchar(50)	Yes		NULL
Location	Varchar(50)	Yes		New Delhi

Query List

1. Query to display Employee Name, Job, Hire Date, Employee Number; for each employee with the Employee Number appearing first.
2. Query to display unique Jobs from the Employee Table.
3. Query to display the Employee Name concatenated by a Job separated by a comma.
4. Query to display all the data from the Employee Table. Separate each Column by a comma and name the said column as THE_OUTPUT.
5. Query to display the Employee Name and Salary of all the employees earning more than $2850.
6. Query to display Employee Name and Department Number for the Employee No= 7900.
7. Query to display Employee Name and Salary for all employees whose salary is not in the range of $1500 and $2850.
8. Query to display Employee Name and Department No. of all the employees in Dept 10 and Dept 30 in the alphabetical order by name.
9. Query to display Name and Hire Date of every Employee who was hired in 1981.
10. Query to display Name and Job of all employees who don't have a current Manager.
11. Query to display the Name, Salary and Commission for all the employees who earn commission.
12. Sort the data in descending order of Salary and Commission

Assignment Question for BCA Semester –IV

Subject : PHP Programming

Paper : SEC-1

Question 1: What is PHP and its important tools and software requirments?

Question 2: Define data types of PHP and explain scope of a variable.

Question 3: Explain different types of operators in PHP.

Question 4: Explain GET and POST form methods.

Question 5: Explain call by value and call by reference function in PHP.

Question 6:

****

Sahibganj College ,Sahibganj

Department of BCA

Assignment Question for BCA Semester –V

Subject : Internet Technologies

Paper : Core –XI

Question 1: Explain the Array List class with suitable example.

Question 2: Explain different types of operators in java scripts.

Question 3: Define control Structures in Java Scripts.

Question 4: Explain Events and event handling in java scripts.

Question 5: what is JDBC and explain how to connect database with the help of JDBC with suitable example.

Question 6: Explain JSP Application Design with MVC suitable example.

Question 7: Explain Sharing Data Between JSP Pages with example.

Question 8: Define java bean and developing a simple Bean application .

Question 9: explain Error Handling and Debugging in JSP.

Question 10:Question 10: Print a table of numbers from 5 to 15 and their squares and cubes using alert.

Question 11: Print the largest of three numbers.

Question 12:Find the factorial of a number n.

Question 13: Enter a list of positive numbers terminated by Zero. Find the sum and average of these numbers.

Question 14: A person deposits Rs 1000 in a fixed account yielding 5% interest. Compute the amount in the account at the end of each year for n years. Read n numbers. Count the number of negative numbers, positive numbers and zeros in the list.

j College ,Sahibganj

Department of BCA

Assignment Question for BCA Semester –V

Subject : Microprocessor

Paper : DSE-1

Question 1: Explain Internal Microprocessor architecture with diagram.

Question 2: Explain microprocessor system bus architecture with diagram.

Question 3: Explain microprocessor memory and I/O interfaces .

Question 4: Explain microprocessor register organization.

Question 5: Explain microprocessor instruction formats.

Question 6: Explain Memory address decoding of microprocessor.

Question 7: Write short notes of the following terms:- a) cache memory and cache controllers

b) DMA controller c) interrupt controller d) communication interfaces

Question 8: Write a program for 32-bit binary division and multiplication.

Question 9: Write a program for 32-bit BCD addition and subtraction.

Question 10: Write a program for linear search and binary search.

Question 11: Write a program to add and subtract two arrays.

Question 12: Write a program for binary to ASCII conversion.

Question 13: Write a program for ASCII to binary conversion.

Sahibganj College ,Sahibganj

Department of BCA

Assignment Question for BCA Semester –V

Subject : Network Programming

Paper : DSE-2

Question 1: Explain TCP, UDP, SCTP Protocol .

Question 2: What is Socket Programming explain TCP socket with example.

Question 3: Explain I/O multiplexing using sockets.

Question 4: What is UDP Sockets and explain UDP client server with example.

Question 5: Explain Address lookup using sockets.

Question 6: Write short notes of the following terms :-

a) Remote logging
b) Email
c) WWW
d) HTTP