Question Bank for LP-II Practical Examination

1)	Implement depth first search (DFS) algorithm and breadth first search (BFS) algorithm. Use an application for undirected graph and develop a recursive algorithm for searching all the vertices of a graph or tree data structure. Also print the levels as it traverses for both algorithms.
2)	Implement A Star Algorithm for any game search problem.
3)	Implement Greedy Search algorithm on some application for : I. Minimum Spanning Tree **OR** II. Single–Source Shortest Path Problem
4)	Implement Greedy Search algorithm on some application for : I. Job Scheduling Problem **OR** II. Prim's Minimal Spanning Tree algorithm
5)	Implement Greedy Search algorithm on some application for : I. Kruskal's Minimum Spanning Tree algorithm **OR** II. Dijkstra's Minimum Spanning Tree algorithm
6)	Implement a solution for a Constraint Satisfaction Problem using Branch and Bound; and Backtracking for n–queens problem **OR** a graph coloring problem
7)	Develop an elementary chat bot for any suitable customer interaction application.
8)	Implement **any one** of the following Expert System which will give expert opinion: I Information management II Hospitals and medical facilities III Help desk management IV Employee performance evaluation V Stock market trading VI Airline scheduling and cargo schedules
9)	**CC:** Create following application in SalesForce.com using Apex Programming Language: i. Mathematical Calculator ii. Generate student mark sheet
10)	**CC:** Create following application in SalesForce.com using Apex Programming Language: To find greatest among three numbers
11)	**CC:** Create following application in SalesForce.com using Apex Programming Language: i. For a given unit generate or calculate electricity bill ii. To convert degree Celsius to Fahrenheit
12)	**CC:** Create an application of currency converter in SalesForce.com using Apex Programming Language

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13)	**CC:** Design and develop Student Database custom Application using Sales Force Cloud: Take student details as inputs from user viz; first name, last name, DoB, contact number, e–mail id, gender, Adhaar or PAN number, et cetra; further formulate the Age from DoB (date of birth) & then display the eligibility status for voting in the election
14)	**CC:** Design and develop Employee Database custom Application using Sales Force Cloud:
15)	**IS:** Write a Java/C/C++/Python program to perform encryption and decryption using the method of Double Columnar Transposition technique.
16)	**IS:** Write a Java/C/C++/Python program to implement DES **OR** S–DES (simplified DES) algorithm.
17)	**IS:** Write a Java/C/C++/Python program to implement AES **OR** S–AES (simplified AES) algorithm. **OR** Implement the Diffie–Hellman Key Exchange mechanism using HTML and JavaScript. Consider the end user as one of the parties (Alice) and the JavaScript application as other party (bob).
18)	**IS:** Write a Java/C/C++/Python program to implement RSA algorithm.
19)	**IS:** Calculate the message digest of a text using the MD5 algorithm in JAVA
20)	**ARVR:** Develop a scene in Unity that includes: i. A cube, plane and sphere, apply transformations on the 3 game objects. ii. Add a video and audio source.
21)	**ARVR:** Develop a scene in Unity that includes a cube, plane and sphere. Create a new material and texture separately for three Game objects. Change the color, material and texture of each Game object separately in the scene. Write a C# program in visual studio to change the color and material/texture of the game objects dynamically on button click.
22)	**ARVR:** Develop and deploy a simple marker based AR app in which you have to write a C# program to play video on tracking a particular marker. **OR** Develop and deploy an AR app, implement the following using Vuforia Engine developer portal: i. Plane detection ii. Marker based Tracking (Create a database of objects to be tracked in Vuforia) iii. Object Tracking