CHRIST (Deemed to be University), Bangalore – 560 029
Department of Computer Science
C1-Part 2

Programme Name: 3MCA-A&B **Max. Marks: 10**
Course Name: Advanced PYTHON (MCA519A-3) **Time: 1Hr 15 Mins**

CO1: Demonstrate 2D, 3D visualizations using Python
CO2: Apply StreamLit for UI creation

Silver Price Calculator & Silver Sales Analysis

Silver prices in India have increased due to a global rally, rising industrial and investment demand, tight supply, a weaker rupee, and strong domestic buying. To analyze this trend and understand regional consumption patterns, develop a Silver Price Calculator and Silver Sales Dashboard using Streamlit and GeoPandas. The application should visualize state-wise silver purchases in India, provide meaningful analytical insights through charts, and allow users to calculate the cost of silver based on weight and prevailing prices. Deploy the application for better experience.

1. Silver Price Calculator(5 Marks)

Allow users to enter: Weight of silver (in grams or kilograms) and Current price of silver per gram. Calculate and display the total cost of silver based on the input values. Provide a currency conversion option (INR to USD or other currency).

Additional Features: Display a **historical silver price chart** using the given dataset with filter options:

- $\leq$ 20,000 INR per kg
- Between 20,000 and 30,000 INR per kg
- $\geq$ 30,000 INR per kg

2. Silver Sales Dashboard (5 Marks)

Load the provided state-wise silver purchase dataset into the Streamlit application. Display an India state-wise map using GeoPandas, where darker shades represent higher silver purchases (in kg).

Silver Sales Insights

1. Display the top 5 states with the highest silver purchases using a bar chart.
2. Create a dataframe for Karnataka's monthly silver purchases and visualize it using a line chart to show monthly trends.

Submission Guidelines

- Create a Word document to paste the question-wise screenshot of the StreamLit App with all necessary input and output and name the file as 2547104_CIA1.docx
- Upload the word document, .py files with proper naming conventions in Google Classroom on or before the given deadline. Also provide a link of the deployed App for evaluation.