

Department of I.C.T., Veer Narmad South Gujarat University, Surat Internal Examination 2024 (Date: 21 October 2024)					
Semester:	M.Sc.(I.T.) 7 th Semester	Total Marks:	40	Exam Seat No.	Signature
Subject:	706 - Practical 16	Duration:	2 Hrs		

- ❖ Create an enumeration for Product Category with values Electronics, Clothing, Footwear, Furniture, and Furnishing.
- ❖ Create a database for Product data management with Name, Rate, Category and Description in Product Table and Product GST detail with Product, SGST, CGST, Total GST in Product GST Detail table.
- ❖ SGST = State GST and CGST = Central GST.
- ❖ Use LINQ wherever applicable.

Q.1 Create an MVC Core Web API for following requirements: [10]

- ✧ Prepare an endpoint to input Product Category and Rate to calculate GST and return Total GST from the endpoint.
- ✧ Use enumeration for Product Category.
- ✧ Calculate GST = Product Rate X Product Category wise GST in %.
- ✧ Product Category wise GST percentage is as follows:
 - Electronics 20%, Clothing 12%, Footwear 18%, Furniture 30%, and Furnishing 28%.

Q.2 Create an MVC Core Web application for Salary Increment. [20]

- ✧ Using Entity Framework, insert Product GST data in Product GST Detail Table.
- ✧ Use enumeration for Product Category.
- ✧ Allow user to select specific Product to insert GST data.
- ✧ Use Web API created in Q.1 to get total GST value and calculate SGST and CGST before inserting data in table. No manual data entry for GST values.
- ✧ SGST = 50% Total GST and CGST = 50% Total GST.

Q.3 Perform the following operations on given data set **laptops.csv: [10]**

1. Display information of laptops having brand “Apple” and model name “Macbook Pro”.
2. Display information of laptops having Windows Operating System..
3. Display the information of laptop having 16GB RAM and MacOS.
4. Calculate the average price of Dell laptops.
5. Calculate the Model Name wise Apple laptop’s average price.
6. Graphically show the comparative data of laptops brands.
7. Graphically show the relationship between RAM and Price of laptops.
8. Graphically show the relationship between screen size and price of laptops.
9. Graphically show the price distribution of laptops.
10. Graphically show the contribution of RAM types and explode the RAM having lowest contribution.