

CT-1 Section-B CSE 315
Time: 30 Mins Total Marks-15
Fall 2024

1. You are part of a research team studying the behavior and experiences of freelance workers in the tech industry who primarily take on short-term contracts. Many of these workers are difficult to locate as they do not belong to formal organizations, and some work entirely remotely. The team initially knows a few freelancers who are willing to participate, but you need to expand the sample size and reach more individuals in this hidden population.

Would **snowball sampling** be an appropriate method for collecting data on this population? If so, explain why you chose this sampling method. How does this technique help in accessing hard-to-reach groups like freelance workers?

2. What do you mean by primary and secondary sources of data? Briefly explain with an example. [3]
 3. The CSV file (car.csv) contains the following features: [8]

	Car_Name	Year	Selling_Price	Present_Price	Driven_kms	Fuel_Type	Selling_type	Transmission	Owner
0	ritz	2014	3.35	5.59	27000	Petrol	Dealer	Manual	0
1	sx4	2013	4.75	9.54	43000	Diesel	Dealer	Manual	0
2	ciaz	2017	7.25	9.85	6900	Petrol	Dealer	Manual	0
3	wagon r	2011	2.85	4.15	5200	Petrol	Dealer	Manual	0
4	swift	2014	4.60	6.87	42450	Diesel	Dealer	Manual	0
...	...	...	...	...	...	...	...	...	...
296	city	2016	9.50	11.60	33988	Diesel	Dealer	Manual	0

- (a) Read the data set from the (car.csv) file and print 5 values of car name 'city'.
 (b) The feature set has a target variable, "Selling_price," which needs to be differentiated from input features. Write code on how you differentiate it.
 (c) Identify how much missing information is present in your dataset.
 (d) The first feature represents the Car_Name, which needs to be dropped from the dataset. Write code how to drop it.