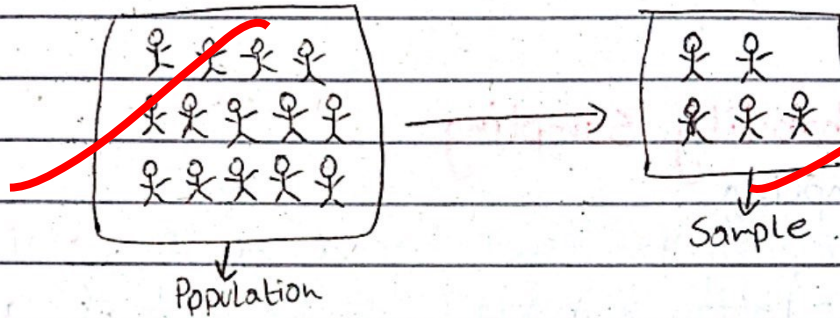


Good
Correct answers
Proper steps
Enough headings
Paper presentation is fine

CSS 2022

Q8) a) What do you understand by Sampling? Discuss Non-probability Sampling.



Definition =

Sampling is technique used by researchers/statisticians, whereby a small portion (or subset) of a overall population is selected for the purpose of collecting data.

Categories of Sampling

There are two types of sampling categories =

- Probability Sampling
- Non-probability Sampling

Probability Sampling

Also known as random sampling. This sampling technique uses randomization to make sure that every element of the population gets an equal chance to be part of the selected sample.

Non-Probability Sampling

This type of sampling technique is the opposite of probability sampling. In this technique, sampling is done

based on the researcher's judgement (or some criteria set by the researcher). All elements of the population do not have ^{an} equal chance of being selected in the sample.

Types of Non-probability Sampling

→ Convenience Sampling

This type of sampling is done based on the availability of the whole population, especially if the cost of sampling is high. Follows 'make do with what you have' approach.

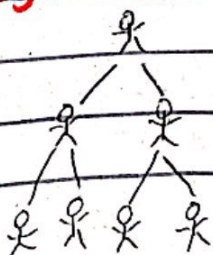
→ Purposive Sampling

This type of sampling is based on the intention/purpose of the study. This means sample is selected based on the elements that suit the purpose of the study. For example, what is the most difficult subject in CSS, ^{researchers} ~~you~~ will have to select students/CSS aspirants etc for the sample.

→ Quota Sampling

This type of sampling depends on pre-set standards. This means ~~they~~ that researchers define a quota, keeping in mind the whole population's traits/characteristics. For example, if the population is 66% rural and 34% urban, the sample should represent the same percentage.

Referral/Snowball Sampling



The technique depends on one element of the sample referring/~~there~~ ^{recommending} other elements for the sample selection.

$$\begin{array}{r} 20000 \\ 15 \\ \hline 100000 \\ 20000 \times \\ \hline 300000 \end{array}$$

$$\begin{array}{r} 800 \\ 600 \\ \hline 200 \\ 200 \times \\ 4800 \times \\ \hline 480000 \end{array}$$

b) lengths of the tile = 12cm and 4cm

$$\text{Area of one-triangular tile} = \frac{1}{2} \times b \times h$$

$$= \frac{1}{2} \times 12 \times 4^2$$

$$= 24 \text{ cm}^2$$

$$\text{Area of the lounge} = L \times B$$

$$= 8m \times 6m$$

or

$$= 800 \text{ cm} \times 600 \text{ cm}$$

$$= 480000 \text{ cm}^2$$

No. of triangular-tiles needed

$$\text{to cover the rectangular-lounge} = \frac{480000}{24}$$

$$= 20000$$

It takes 20,000 tiles to cover the whole lounge.

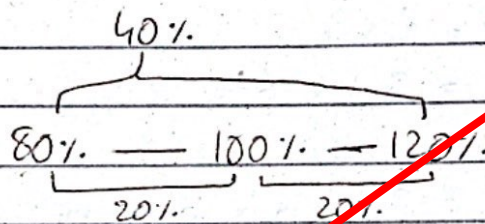
Total cost of covering the lounge with tiles = 15 x 20,000

$$= \text{Rs. } 300,000$$

Each tile cost Rs. 15 and multiply that with 20,000 (no. of tiles) and, therefore, the total cost comes out to be Rs. 300,000

- c) Intended price tag = 80% of original price
 Actual price tag = 120% of original price
 Price above the intended price = Rs. 80

Therefore, $\frac{\text{Actual \% age}}{\text{Intended price}} - \frac{\text{Intended}}{\text{Actual \% age}} = 120 - 80 = 40\%$



~~20%~~ $20\% = \frac{80}{20}$

20% of price = 40
 above 100%.

$20\% \rightarrow 40$
 $100\% \rightarrow x$

$20\%x = 40 \times 100\%$

$x = \frac{40 \times 100\%}{20\%}$

$x = \frac{40 \times 1}{0.2}$

$x = \frac{40 \times 10}{2}$

$x = 40 \times 5$

$x = 200$

The original price comes out to be Rs. 200

A	B	C	D	E	F	G	H
I	J	K	L	M	N	O	P
Q	R	S	T	U	V	W	X
Y	Z						

- d)
- B = Q → 10 steps - backward
 - R = D → 12 steps - forward
 - O = G → 8 steps - backward
 - T = S → 1 step - backward
 - H = N → 6 steps - forward
 - E = Q → 12 steps - forward
 - R = A → 9 steps - forward

S = I

I = U

S = K

T = S

E = K

R = D

STSTER can be written as IUKSKD. The first-letter is 10-steps backward, second letter is 12-steps forward, third letter is 8-steps backwards, fourth letter is 1-step backward, fifth letter is 6-steps forward and sixth letter is 12-steps forward.