Value Based Questions

Que 1. A survey was conducted on 50 persons of a society to find whether they title them as honest (H), courageous (C), creative (Cr), cooperative (Co) or patriotic (P). The following data was obtained:

P	H	H	Co	H	Cr	C	C	Cr	P
Co	P	H	Cr	P	P	C	Cr	P	H
H	Cr	Co	C	C	Co	P	P	H	Co
P	H	C	H	Co	C	C	P	Co	C
Co	P	Cr	P	P	P	H	Co	P	Cr

Construct a frequency distribution table for the above data.
Which social value amongst the above values is the most important according to you for the development of a society? Justify your answer.

Sol.

Value Traits	Tally Marks	Number of Persons
Honest	𝍸 𝍸	10
Courageous	𝍸 ||||	9
Creative	𝍸 ||	7
Cooperative	𝍸 ||||	9
Patriotic	𝍸 𝍸 𝍸	15
	Total	50

Each value with justification is correct. (Write yourself)

Que 2. The following data on the number of girls to the nearest ten per thousand boys in different sections of the society is given below:

Section	Number of girls per thousand boys
Scheduled Case (SC)	940
Scheduled Tribe (Tribe)	970
Non-SC/ST	920
Backward districts	950
Non-backward districts	920
Rural	930
Urban	910

(i) Represent the above information by a bar graph.
(ii) Write two conclusions you can arrive at from the graph, with justification.
Is gender equity important? How will relate it with social development?

Sol. (i)

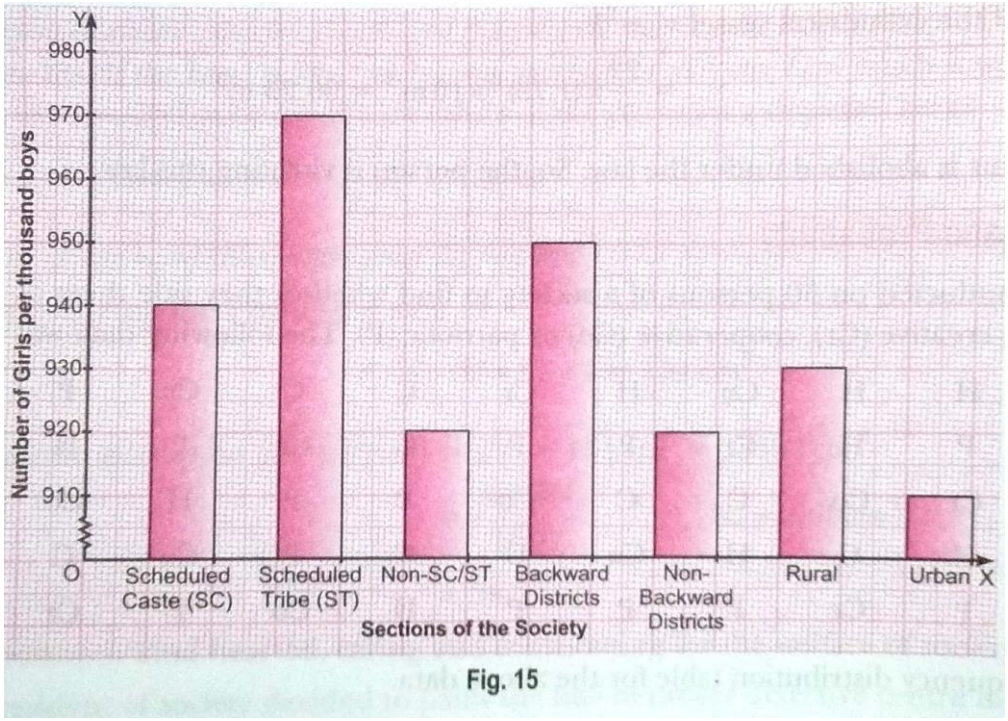

Fig. 15

(ii) The gender equity exists most in scheduled tribe and least in urban areas.
Yes, gender equity leads to economic growth which, in turn, helps in the development of a society.

Que 3. The percentage of salary donated by twelve different households to an orphanage every month are: 2, 5, 3, 5, 6, 1, 2, 4, 3, 5, 2, 2

Find the mean, median and mode of the data.
What qualities do the persons of these households possess?

Sol. Mean = $\frac{Sum\ of\ the\ observations}{Number\ of\ observation}$

$$= \frac{2+5+3+5+6+1+2+4+3+5+2+2}{12} = \frac{40}{12} = 3.3$$

Mean percentage of salary donated = 3.3%
Arranging the data in ascending order, we get
1, 2, 2, 2, 2, 3, 3, 4, 5, 5, 5, 6

The maximum occurring observation = 2
∴ Modal percentage of salary donated = 2%

$$Median = \frac{\left(\frac{n}{2}\right)^{th}\ observation + \left(\frac{n}{2}+1\right)^{th}\ observation}{2}$$

$$= \frac{6^{th} observation + 7^{th} observation}{2} = \frac{3+3}{2} = 3$$

∴ Medan percentage of salary donated = 3%
Social service, kind, caring.

Que 4. Tanya a class IX student received cash award of ₹10,000 (Ten thousand) in the singing competition. Her father advised her to make a budget plan for spending this amount. She made the following plan:

S.No.	Head	Amount
1	Donation to temple	200
2	Tuition fee to needy child	100
3	Welfare of senior citizen	500
4	Welfare of street children	800
5	Saving in bank	4000
6	Books for family library	2000
7	Picnic for family	1000
8	Gift to grandparents	1100
9	Tea party to friend	300
	Total	10,000

Make a bar graph for the above data.
From the above information answer the following questions:
1. Which mathematical concepts have been covered in this?
2. How will you rate her budget plan? In your opinion which head has been given (i) more than it deserved and (ii) less than it deserved?
3. Which values are depicted in her plant?

Sol.

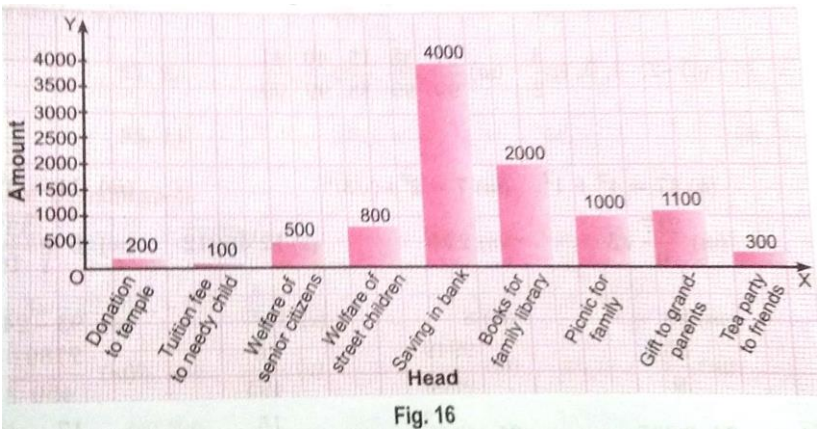

Fig. 16

1. Statistics 2. Do yourself 3. Respect for elders, kind, socially active.

Que 5. Out of 125 houses in a locality, 45 donate some part of their income every month to a charitable. Organisation. Find the probability that a household chosen at random does not donate every month.
How does donation to charitable organisations help in the development of society?
What social values do these 45 households possess?

Sol. $\frac{16}{25}$**,** Charitable organisations provide help to needy persons, so donating them means channelising the funds in the right way and hence, developing the society. Such households are socially active, generous and responsible citizens.

Que 6. At a petrol pump, it was found that out of 50 vehicles that came there, 22 asked for petrol and the remaining used other fuels.
(a) Find the probability that the next vehicle that will come, will ask for petrol.
(b) How can we save petrol?

Sol. (a) $\frac{11}{25}$
(b) By using more of public transport wherever possible and using substitutes of petrol such as diesel and CNG.