Bar Graphs

A. Choose the Correct Answer:

1. Which of the following is best represented using a bar graph?

a) The height of students in a class

b) The weight of one student over a week

c) Monthly rainfall in a city

d) Daily temperature changes

2. What does the height of a bar in a bar graph represent?

a) The label of the category

b) The number of bars

c) The value or quantity of the data

d) The name of the graph

3. If all bars in a bar graph are of the same height, it means:

a) The values are increasing

b) The values are different

c) The values are equal

d) The bars are wrongly drawn

4. In a bar graph, the distance between the bars should be:

a) Decreasing b) Increasing

c) Unequal d) Equal

5. Which of these is NOT true for a bar graph?

a) Bars can be drawn horizontally or vertically

b) It is used to show comparison

c) It shows continuous data

d) Each bar represents a category

B. Write the Missing Terms to Complete the Sentences:

1. The _____ of the bar in a bar graph tells us the value of data.

2. A bar graph is a way of displaying data using _____.

3. The bars in a bar graph should be of _____ width.

4. To construct a bar graph, first we must draw the _____ and _____ axes.

5. The scale used in a bar graph must be _____ throughout the graph.

C. Figure out the answers to these questions:

1. The number of books read by five students in a month is as follows: 4, 6, 8, 5, 7. Represent this data using a vertical bar graph.
2. A survey shows the number of hours students spend on various activities in a week:

   - **Studying:** 20 hours
   - **Playing:** 10 hours
   - **Watching TV:** 8 hours
   - **Sleeping:** 50 hours
   - **Others:** 10 hours

   Represent the data in a bar graph and answer:

   Which activity has the highest time?

   How many more hours are spent on sleeping than watching TV?
3. In a bar graph showing favorite fruits of students, the number of students choosing apples is 20, bananas is 15, oranges is 25, and mangoes is 30.

   Draw a bar graph.

   Which fruit is liked the most?

   How many students were surveyed in total?
4. A shopkeeper sold the following number of cold drinks in a week:

   - **Monday:** 50
   - **Tuesday:** 40
   - **Wednesday:** 45
   - **Thursday:** 55
   - **Friday:** 60

   Create a bar graph and answer:

   On which day were the least drinks sold?

   What is the difference between the highest and the lowest sales?
5. Identify the mistakes (if any) in this bar graph and suggest corrections. (Provide a simple bar graph with uneven bars, unclear scale, or missing labels.)
6. Create a bar graph using the data collected from your classmates about their favorite sport. Mention the steps you followed.

7. Compare two bar graphs: one showing the rainfall in City A and one showing rainfall in City B across 4 months. Analyze which city received more consistent rainfall and explain how you decided.
8. Explain how changing the scale in a bar graph can affect the interpretation of data.

D. Mark each sentence with a True (✓) or False (✗):

1. A bar graph is used to compare different categories of data. ☐
2. All bars in a bar graph must touch each other. ☐
3. Bar graphs can only be drawn vertically. ☐
4. A scale must be mentioned in every bar graph. ☐
5. Bar graphs are used to represent grouped data clearly. ☐

E. Challenge yourself with these questions:

1. Conduct a quick survey of 10 classmates and ask their favorite subjects. Use tally marks to record and then represent it as a bar graph.
2. Make a bar graph of the number of visitors to a park on 5 different days. Write two observations based on your graph.
3. Take a newspaper or magazine and find any bar graph. Cut it out and paste it in your notebook. Write 3 facts you observe from it.
4. Design your own bar graph on a topic of your choice (e.g., number of pets in homes, snacks eaten during a week, etc.) and explain what your graph shows.
5. Create a wrong bar graph on purpose. Ask your friend to find and explain what is wrong with it.
6. Make a double bar graph comparing test marks of two students in 5 subjects.
7. Choose any festival and survey how many students celebrate it. Collect and display data in a bar graph.
8. Write a short paragraph explaining why bar graphs are useful in real life.