

Chapter: Light

Subtopic: Images formed by lenses, Sunlight-coloured or white?

Section 1:

1. Fill in the blank and complete the sentences.

- (i) A prism splits light into _____ colours.
- (ii) The seven colours in rainbow are red, orange, yellow, green, blue, _____ and _____.
- (iii) The splitting of white light into its seven constituent colours is called _____.
- (iv) _____ is the study of spectrum formed when a surface emits light.
- (v) _____ was the first person who discovered that sunlight is made up of seven colours.

2. Answer the questions.

a. What is prism?

b. What happens when a beam of light enters a prism?

3. Mark 'T' if the statement is true and 'F' if it is false:

- (i) The colours in a rainbow are not the colours of sunlight. []
- (ii) Red, Blue and Yellow are primary color. []
- (iii) Red roses reflects red light. []

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Section 2:

4. Multiple choice questions:

a. The colour of light which is deviated the least by prism in the spectrum of white light is

- | | | | |
|-------|--------|---|----------------------|
| (i) | violet | - | <input type="text"/> |
| (ii) | green | - | <input type="text"/> |
| (iii) | yellow | - | <input type="text"/> |
| (iv) | red | - | <input type="text"/> |

b. A rainbow can be seen in the sky

- | | | | |
|-------|---------------------------------|---|----------------------|
| (i) | when the sun is in front of you | - | <input type="text"/> |
| (ii) | when the sun is behind you | - | <input type="text"/> |
| (iii) | when the sun is overhead | - | <input type="text"/> |
| (iv) | only at the time of sunrise | - | <input type="text"/> |

5. What is meant by spectrum? Name the colours of spectrum in their order. Draw a diagram to show the spectrum of white light by a glass prism.

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Section 3:

6. Answer the following questions briefly.

a. Name the colours include in the composition of sunlight.

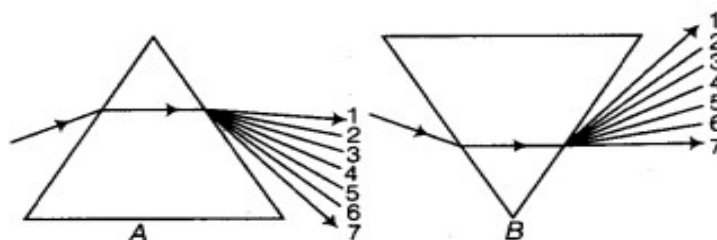
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b. In the formation of a rainbow, what acts as tiny prisms?

.....

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7. State the correct sequence (1-7) of colours in the spectrum formed by the prisms A and B shown in the figure.



For fig. A

1	→	
2	→	
3	→	
4	→	
5	→	
6	→	
7	→	

For fig. B

1	→	
2	→	
3	→	
4	→	
5	→	
6	→	
7	→	

8. Give the definition of dispersion of light. Also, explain why does it take place?

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Section 4:

9. One day, Ramesh's friend was performing their respective experiments given by their teacher. While sitting in the practical lab instead of performing experiment, Ramesh was playing with his meter scale. All the sudden, he held the scale in his hand and started moving in front of tube light, then he observed the seven colours of white light. After sometimes, he got scolded by his lab teacher for not performing the experiment.

- a. Give the name of phenomenon that leads to the formation of band of seven colours.

- b. Name the constituent colours of white light.

- c. Mention the values shown by Ramesh here. (Value Based Question)

10. Write a short note on Newton's disc. State what we can demonstrate by rotating Newton's colour disc very fast.
