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Q1.
(a) About 150°
(b) About 180°

Q2. Animals having two eyes on the opposite sides of their head.
Q3.
(i) Predators
(ii) Animals of prey
Q4. True

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Q5. (a) wider
(b) distances
Q6.
Following are the advantages of having two eyes instead of one:
1. Having two eyes gives a wider field of view.
2. Having two eyes enables us to judge distances more accurately.
Q7.
A person who has lost the sight of one eye has a narrower field of view than the normal person who has two good eyes. Also, the person with one eye cannot judge distances accurately.
Q8.
(a) Rabbit, deer
(b) Tiger, lion
Q9.
The predators (like lions) have their eyes facing forward at the front of their heads, whereas the animals of prey (like rabbit) usually have eyes at the sides of their head so that they can see their enemies (predators) in a very large area around them and try to escape from them.
Q10.
(a) A and C
(b) B, D and E

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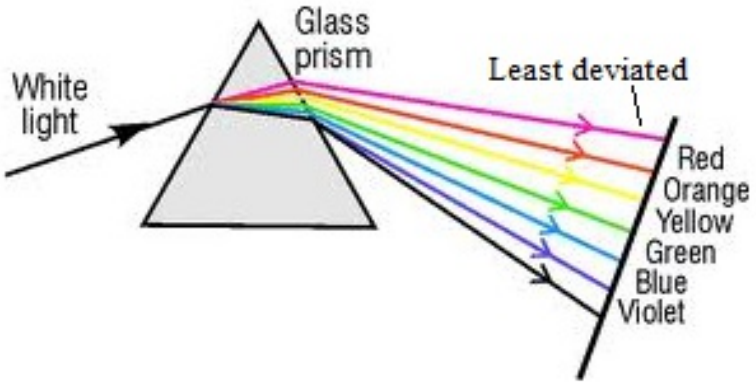
Q1.
Towards the normal
Q2.
Away from the normal
Q3.
Rainbow
Q4.
Sunlight consists of seven colours.
Q5.
Newton demonstrated by his experiments with the prisms that white light consists of a mixture of seven colours.
Q6.
Seven colours - Violet, indigo, blue, green, yellow, orange, red
Q7.
The seven colours of the spectrum of white light are denited by the word VIBGYOR where V stands for Violet, I for Indigo, B for Blue, G for Green, Y for Yellow, O for Orange and R for Red.

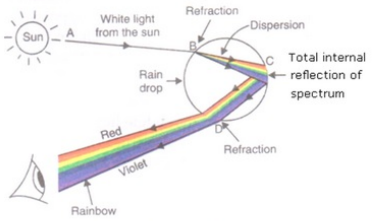
It is connected with the phenomenon of dispersion of light.
Q8.
(i) Red
(ii) Violet
Q9.
Yellow and Blue
Q10.
Newton
Q11.
Red, Orange, Yellow, Green, Blue, Indigo and Violet
Q12.
(a) Red
(b) Violet
Q13.
Red Light
Q14.
Violet
Q15.
(a) towards, away from
(b) seven, violet
Q16.



(iii) Different coloured rays deviate differently in a prism because different colours travel at different speeds through the glass prism.
Q17.
(a) When a ray of ordinary light is passed through a triangular glass prism, it splits to form a band of seven colours.
(b) If another similar glass prism is placed upside down behind the first prism, then the seven coloured rays from the first prism which are incident on the second prism recombine to form the original white beam.
Q18.
Yes, it is possible to recombine the lights of seven colours to obtain the white light again by placing another similar prism alongside the first one in the inverted position as shown below.
The first prism disperses the white light into seven coloured rays. the second prism receives all the seven coloured rays from the first prism and recombines them into original white light. This is because the refration produced by the second prism is equal and opposite to that produced by the first prism.
Q19.
(a) The band of seven colours formed on a white screen, when a beam of white light is passed through a glass prism is called spectrum of white light. A glass prism is used to produce a spectrum.
(b) There are seven colours in the spectrum of white light. The colours are Red, Orange, Yellow, Green, Blue, Indigo and Violet.
Q20.

The splitting up of white light into seven colours on passing through a transparent medium like a glass prism is called dispersion of light.

Formation of rainbow:



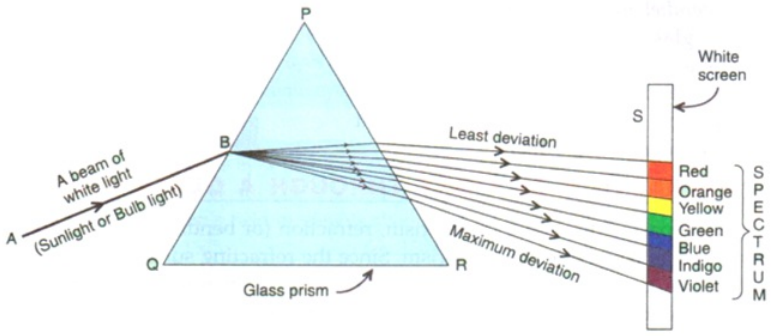
The raindrops act like small prisms. When sunlight enters and leaves these raindrops, the various coloured rays in white light are refracted by different amounts due to which an arc of seven colours called rainbow is formed.

Q21.

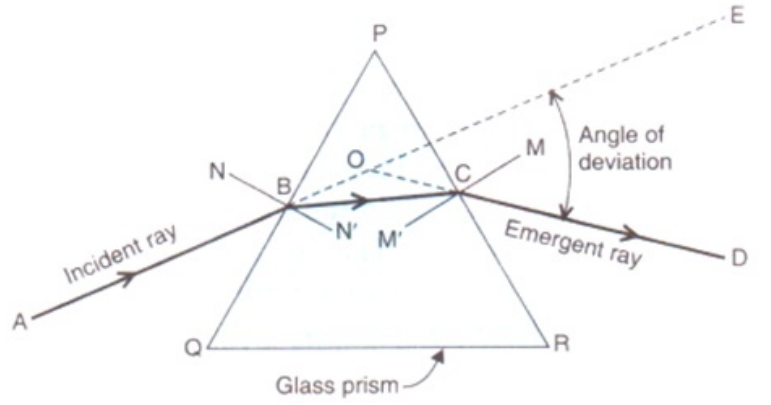
(a) (i) violet (ii) Red

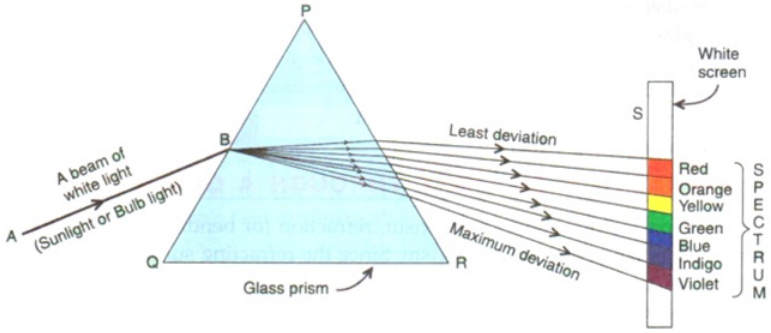
(b) Different colours of white light bend through different angles because different colours travel through different speeds through in the glass prism.

Q22.



Q23.





Q24.

We will allow a beam of white light to pass through a glass prism. The white light splits to form a band of seven colours. This shows that white light is composed of seven colours.

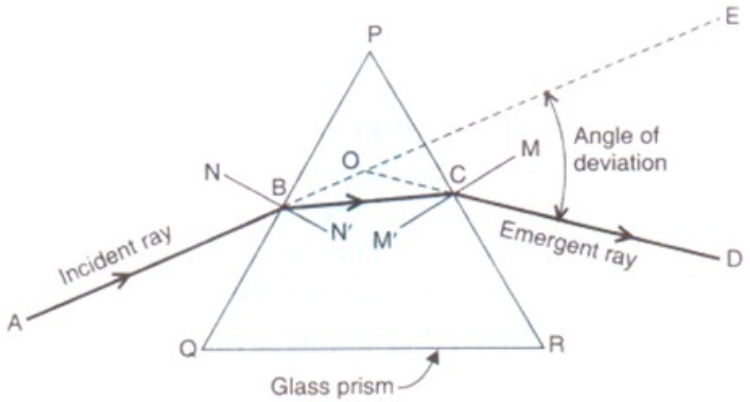
Q25.

Colours of a spectrum from one prism are allowed to fall on a similar prism placed adjacent to the first prism, but in inverted position. The refraction produced by second prism is equal and opposite to that produced by the first prism. This makes the colours of the spectrum combine to give white light.

Q26.

Violet light is refracted the most because violet colour has the

minimum speed in glass prism.
Q27.



(b) Rainbow is an arch of seven colours visible in the sky which is produced by the dispersion of sun's light by raindrops in the atmosphere. A rainbow is formed in the sky when the sun is shining and it is raining at the same time.
(c) Raindrops
(d) Dispersion of light
(e) Red, Orange, Yellow, Green, Blue, Indigo and Violet.

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Q38:
Because a flat pane of glass has parallel sides.
Q39:
(a) White Paper
(b) Blackboard
Q40:
Formation of the rainbow in the sky.

********** END **********