

## PHYSICS FORM 4 KSSM

### 6.2 TOTAL INTERNAL REFLECTION

Diagram 1 shows a light phenomenon that occurs on a sunny day,  
Diagram 2 shows a periscope on submarine



Diagram 1

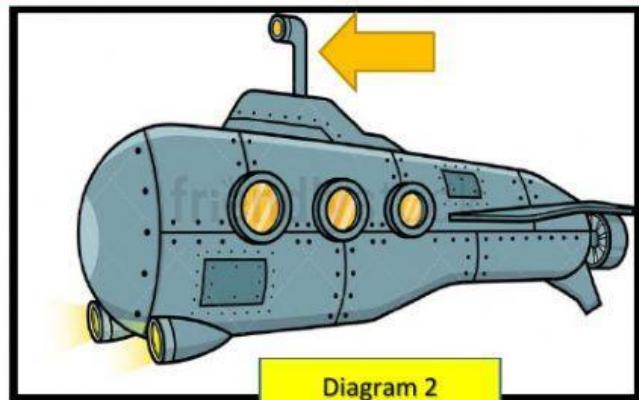


Diagram 2

1.(a)state the natural phenomena that occurs

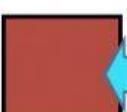
1.(b)Explain how the phenomena occurs. Arranges according to the correct sequences.

1

2

3

4

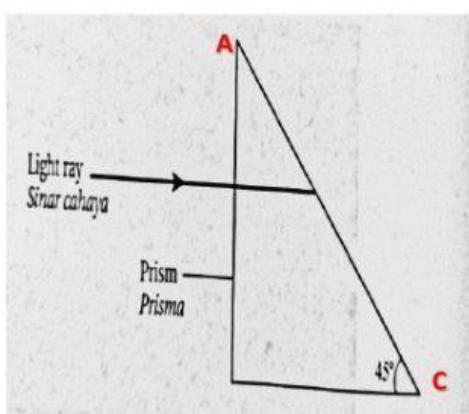
 The light is gradually refracted away from the normal

 Sunlight travel from upper layer to the lower layer

 At certain layer, the light travel with incident angle greater than critical angle, total internal reflection occurs

 Layer of hot air on the surface of the Earth is less dense than upper layer

1 (c)Diagram shows a light entering prism. The refractive index of the prism is 2.419.



(i)Determine the incident angle at the surface AC.

(ii)Calculate the critical angle of the prism.

(iii)What happen to the light ray when it reaches surface of AC? Explain why.