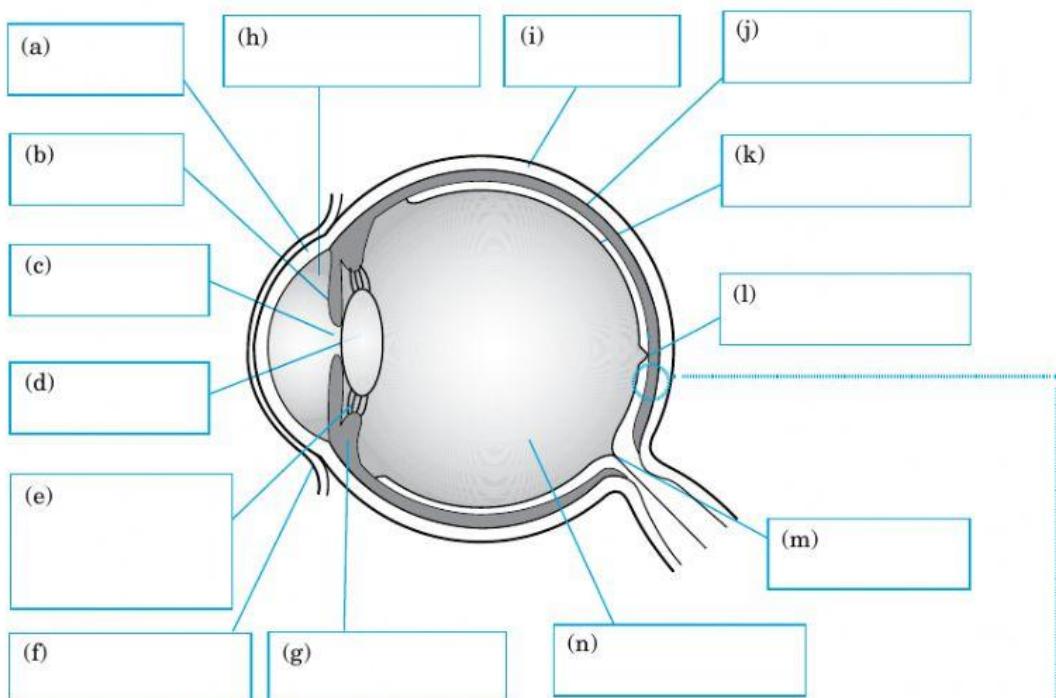


**1.4 AKTIVITI PERBINCANGAN**

**Struktur mata manusia dan fungsinya**  
*Structure of the human eye and their functions*

- 1 Labelkan struktur mata manusia./Label the structure of the human eye. **TP1**

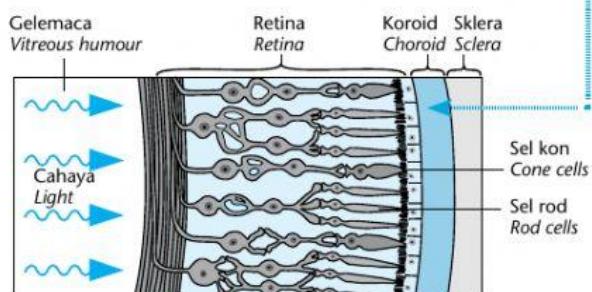
|               |                |                        |                             |                    |
|---------------|----------------|------------------------|-----------------------------|--------------------|
| Iris          | Koroid         | Gelemair               | Kanta mata                  | Bintik kuning      |
| <i>Iris</i>   | <i>Choroid</i> | <i>Aqueous humour</i>  | <i>Eye lens</i>             | <i>Yellow spot</i> |
| Sklera        | Kornea         | Gelemaca               | Otot silia                  | Bintik buta        |
| <i>Sclera</i> | <i>Cornea</i>  | <i>Vitreous humour</i> | <i>Ciliary muscles</i>      | <i>Blind spot</i>  |
| Retina        | Pupil          | Konjunktiva            | Ligamen penggantung         |                    |
| <i>Retina</i> | <i>Pupil</i>   | <i>Conjunctiva</i>     | <i>Suspensory ligaments</i> |                    |



- 2 (a) Namakan **dua** fotoreseptor pada retina./Name two photoreceptors on the retina. **TP1**

\_\_\_\_\_

- (b) Apakah fungsi sel rod dan sel kon? **TP2**  
What are the functions of the rod cells and the cone cells?



|                                  |   |
|----------------------------------|---|
| (i) Sel kon<br><i>Cone cells</i> | Peka kepada cahaya _____ dalam keadaan bercahaya.<br><i>Sensitive to _____ lights in bright condition.</i>  |
| (ii) Sel rod<br><i>Rod cells</i> | Peka kepada _____ cahaya yang berbeza termasuk cahaya _____ tetapi tidak peka kepada cahaya _____.<br><i>Sensitive to different _____ of light including _____ light but not sensitive to _____ lights.</i> |

3 Kenal pasti bahagian mata berdasarkan fungsinya. **TP2**

Identify the parts of the eye based on their functions.

| Bahagian mata<br><i>Parts of the eye</i> | Fungsi<br><i>Functions</i>   |
|--|--|
| (a)                                      | Membran lut sinar yang melindungi kornea<br><i>Transparent membrane that protects the cornea</i>   |
| (b)                                      | Membias dan memfokuskan cahaya ke atas retina<br><i>Refracts and focuses light onto the retina</i>   |
| (c)                                      | Memfokuskan cahaya ke atas retina<br><i>Focuses light onto the retina</i>  |
| (d)                                      | Menbenarkan cahaya memasuki mata<br><i>Allows light to enter the eye</i>   |
| (e)                                      | Mengawal saiz pupil<br><i>Controls the size of the pupil</i>   |
| (f)                                      | Mengubah ketebalan kanta mata<br><i>Change the thickness of the eye lens</i>   |
| (g)                                      | Memegang kanta mata<br><i>Hold the eye lens</i>  |
| (h)                                      | Mengekalkan bentuk mata dan membantu untuk membias serta memfokuskan cahaya ke atas retina<br><i>Maintains the shape of the eye and helps to refract and focus light onto the retina</i> |
| (i)                                      | Melindungi dan mengekalkan bentuk mata<br><i>Protects and maintains the shape of the eye</i>   |
| (j)                                      | Mengelakkan pantulan cahaya dalam mata dan membekalkan oksigen serta nutrien kepada mata<br><i>Prevents reflection of light in the eye and supplies oxygen and nutrients to the eye</i>  |
| (k)                                      | Mengandungi fotoreseptor yang mengesan dan menghasilkan impuls saraf<br><i>Contains photoreceptors that detect light and produce nerve impulses</i>                                      |
| (l)                                      | Bahagian mata yang paling peka terhadap cahaya<br><i>The part of the eye that is the most sensitive to light</i>   |

Praktis  
Kendiri4 Lengkapkan peta alir tentang laluan lintasan cahaya dalam mekanisme penglihatan manusia. **TP2**