



B.K. BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
A CBSE DAY-CUM-BOYS' RESIDENTIAL SCHOOL
PRE-MID TERM EXAM-I 2025-26
SCIENCE MARKING SCHEME (086)

Class: X
Date: 02.08.25

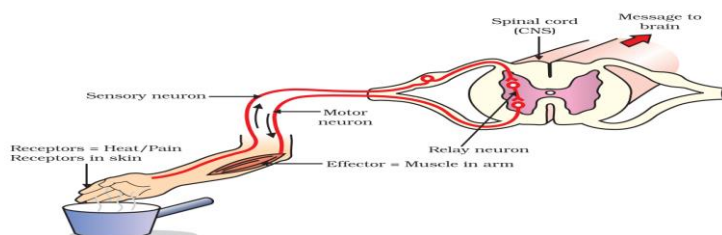
Time: 1 hour
Max Marks: 25

Section A

- | | |
|------------------------------------|---|
| 1. (c) | 1 |
| 2. (b) | 1 |
| 3. (c) | 1 |
| 4. (b) P-(iii) Q-(iv) R-(ii) S-(i) | 1 |
| 5. (a) | 1 |

Section B

- | | |
|---|---|
| 6. The power of accommodation of the eye is the ability of the eye to observe the distinct objects clearly which are situated at a large distance from the eye. The ciliary muscles are responsible to change the focal length of the eye lens. The value of the power of accommodation of the normal human eye is $(d = 25 \text{ cm}) = 100/f = 100/d = 100/25 = 4$ dioptres. The value of power of accommodation of human eye is about 4D. | 2 |
| 7. (i) Cornea: The cornea is the transparent front part of the eye that primarily functions to refract (bend) light entering the eye, focusing it onto the lens. It plays a crucial role in focusing light for clear vision.
(ii) Pupil: The pupil is the small, adjustable opening in the center of the iris that controls the amount of light entering the eye by expanding or contracting depending on light conditions.
(iii) Retina: The retina is a light-sensitive tissue at the back of the eye that receives visual information from the lens and converts it into electrical signals that are sent to the brain through the optic nerve.
(iv) Optic Nerve: The optic nerve is a bundle of nerve fibres that transmits visual information from the retina to the brain, allowing us to perceive images. | 2 |
| 8. Chem Brine solution is carbonated baking soda is formed.
$\text{NaCl} + \text{CO}_2 + \text{H}_2\text{O} + \text{NH}_3 \rightarrow \text{NH}_4\text{Cl} + \text{NaHCO}_3$ chemical equation and one use | 2 |
| 9. Reflex arc is a quick pathway followed in urgent and dangerous situation. | 2 |



Section C

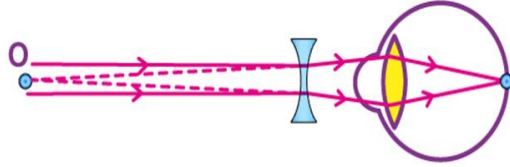
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|---|---|
| 10. Myopia, also known as near-sightedness, is a vision condition where distant objects appear blurry while nearby objects are clear. This occurs when light rays entering the eye focus in front of the retina instead of directly on it.
Causes of Myopia:
Elongated eyeball:
The eyeball is longer than normal, causing light to focus too early. | 3 |
|---|---|

Excessive curvature of the cornea or lens:

If the cornea or lens is too curved, it can cause light to converge too strongly, again focusing the image in front of the retina.

Correction of Myopia:

Myopia is typically corrected using concave lenses (also called diverging lenses). These lenses are thinner at the center and thicker at the edges, and they help to spread out the light rays before they enter the eye, so they focus correctly on the retina.



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| 11. | (i) A (ii) D (iii) D | 3 |
| 12. | a) Iodine is important for thyroid gland to produce thyroxine. It prevents goitre. | 1 |
| | b) Adrenaline release adrenaline into blood → which acts on heart and other tissues
→ causes faster heart beat → more oxygen to muscles → reduced blood supply to
digestive system and skin → increase in breathing rate. | 1 |
| | c) Brain is protected by the cranium and the spinal cord is protected by the vertebral
column. | 1 |
| 13. | When light falls on a plant, auxin diffuses to the shaded side of the stem. This
accumulation of auxin on the darker side stimulates cells there to elongate and divide
more rapidly than those on the illuminated side, causing the stem to bend towards the
light. | 2 |
| | Nastic movement: Non-directional, fast and growth independent | 1 |
| | Trophic movement: directional, slow and growth related. | |