10th Class - Biology Key

1) **Cerebellum**
2) **Deoxyribonucleic acid**
3) **Binary fission**
4) **C**
5) **Protect her, respect her, let her live**

6. What are the functions of testes?

Answer: The functions of the testes are to produce sperm and male hormones, primarily testosterone.

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7. Study the given information and answer the following questions.

i) Which plant hormone helps to get long plants?
Answer: **Axuin**
ii) Which plant hormone is responsible for shedding of leaves?
Answer: **Abscisic acid (అబ్సిసిక్ ఆమ్లం)**

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8. What precautions do you take to maintain proper thyroxine levels in the blood?

Answer: To maintain proper thyroxine levels, one should ensure a sufficient intake of iodine in their diet, as iodine is essential for the synthesis of thyroxine hormone.

9. What is the importance of DNA copying in reproduction?

Answer: DNA copying is important in reproduction because it ensures the transfer of genetic information from the parent to the offspring.
DNA copying creates two identical copies of the DNA. This is crucial for cell division and reproduction, as each new cell or organism needs a complete set of genetic instructions to function correctly. This process also allows for variations to be introduced, which is the basis for evolution.

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10. Do plants respond to stimuli? Justify your answer with suitable examples.

Answer: Yes, plants do respond to stimuli.
Plants respond to various stimuli, such as light, gravity, water, and touch. This response is known as tropism. For example, a plant's stem grows towards a light source (phototropism), and its roots grow downwards in response to gravity (geotropism). Another example is the closing of the leaves of a touch-me-not plant when touched (thigmonasty).

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11. What problems might arise if receptors do not function properly?

Answer: If receptors do not function properly, an organism may fail to respond to stimuli, leading to various problems.
Receptors are crucial for detecting changes in the environment. If they are faulty, the body may not be able to sense pain, temperature, or pressure, which could lead to injuries or failure to detect dangerous situations. For example, a person with damaged heat receptors would not be able to feel if a surface is too hot, potentially causing severe burns.

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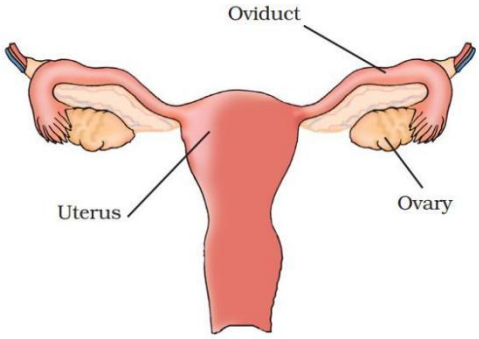
12. Draw a neat labelled diagram of the female reproductive system.

Answer: [A detailed diagram of the female reproductive system with labels should be drawn here. The labels should include the uterus, fallopian tube, ovary, cervix, and vagina.]



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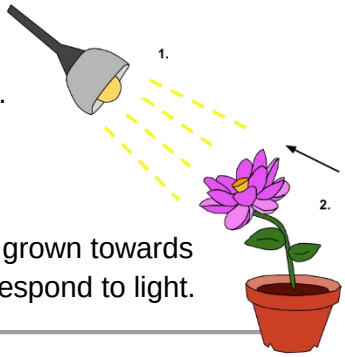
13. A) How do you demonstrate the phototropism in plants?



Answer: Phototropism can be demonstrated using a simple experiment.
1. Place a potted plant in a dark room.
2. Place a small box with a hole on one side over the plant.
3. Ensure that the only source of light for the plant is through the hole.
4. After a few days, you will observe that the plant's stem has bent and grown towards the source of light (the hole in the box). This demonstrates that plants respond to light.

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13. B) Distinguish between pollination and fertilisation.

Answer: Pollination and fertilisation are two distinct but related processes in plant reproduction.
Pollination: This is the process of transferring pollen grains from the anther of a flower to the stigma of the same or another flower. It is a physical process that can be carried out by wind, water, or animals.
Fertilisation: This is the fusion of the male gamete (from the pollen) with the female gamete (in the ovule) to form a zygote. This is a biological process that occurs after pollination.