ONTARIO SCIENCE, GRADE 10, ACADEMIC (SNC2D) · UNIT A · 25 QUESTIONS

Biology: Tissues, Organs, and Systems — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **During mitosis, duplicated chromosomes line up along the equator of the cell. This phase is**

- A Metaphase
- B Anaphase
- C Telophase
- D Prophase

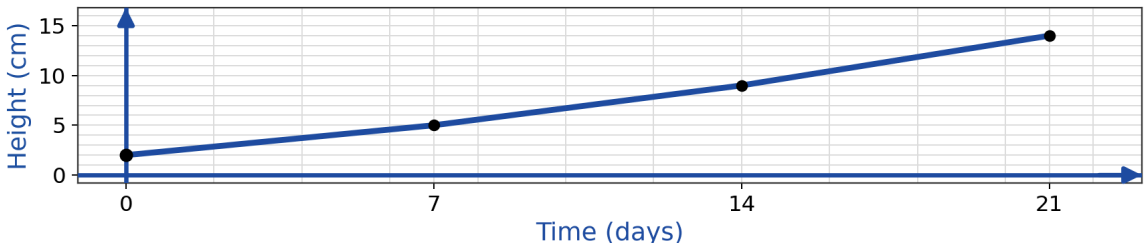
Understand It with Pulse | Flag a mistake

2 **The process by which an unspecialized cell develops the structure and function of a particular cell type is called**

- **A** Fertilization
- **B** Differentiation
- **C** Regeneration
- **D** Mitosis

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3 **The graph shows the measured height of a bean seedling over time. The height after 14 days, in centimetres, is**



ANSWER _____

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4 **Which tissue type covers body surfaces and lines internal organs and cavities?**

A Nervous tissue

B Connective tissue

C Epithelial tissue

D Muscle tissue

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5 **In order from simplest to most complex, the levels of organization in an animal are**

A tissue, cell, organ, organism, organ system

B cell, organ, tissue, organ system, organism

C organ, tissue, cell, organ system, organism

D cell, tissue, organ, organ system, organism

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6 **Which plant tissue transports water upward from the roots to the leaves?**

- A Xylem
- B Epidermis
- C Phloem
- D Meristem

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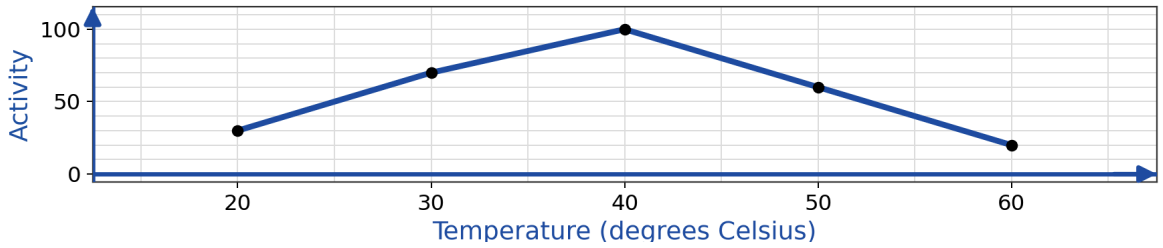
7 **Which plant tissue transports sugars made in the leaves to other parts of the plant?**

- A Epidermis
- B Phloem
- C Xylem
- D Ground tissue

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8

The graph shows measured enzyme activity at different temperatures. The temperature at which enzyme activity is highest, in degrees Celsius, is



ANSWER _____

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9

Some structures in a flowering plant are listed below. 1 Leaf 2 Xylem cell 3 Vascular tissue 4 Whole plant The order from simplest to most complex is ____. Record your answer as a four-digit number.

ANSWER _____

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10 **Which human organ system transports oxygen, nutrients, and wastes in the blood?**

A Digestive system

B Respiratory system

C Circulatory system

D Nervous system

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11 **A student studies how light level affects the growth of bean seedlings. The student changes only the light level. The light level is the**

A controlled variable

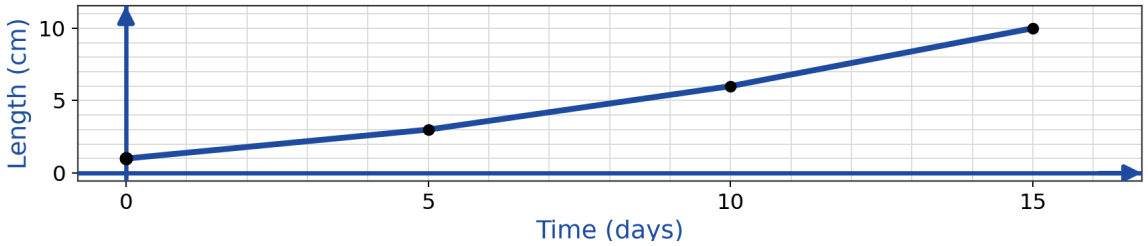
B qualitative observation

C dependent variable

D independent variable

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12 **The graph shows the measured length of a plant root over time. The root length after 10 days, in centimetres, is**



ANSWER

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13 **Uncontrolled cell division that forms a mass of abnormal cells is a feature of**

A Diabetes

B Cancer

C Asthma

D Anaemia

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14 **Which medical technology takes over the filtering job of failing kidneys?**

A Prosthetic limb

B Pacemaker

C Dialysis machine

D Insulin pump

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15 **A human gamete normally has 23 chromosomes. A body cell has twice that number. The number in a body cell is**

ANSWER _____

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16 **Which statement about stem cells is correct?**

A Stem cells are found only in adult muscle tissue

B Stem cells always become nerve cells

C Stem cells are fully specialized and cannot divide

D Stem cells can divide and develop into specialized cell types

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17 **Which plant organ is the main site of photosynthesis in most plants?**

A Leaf

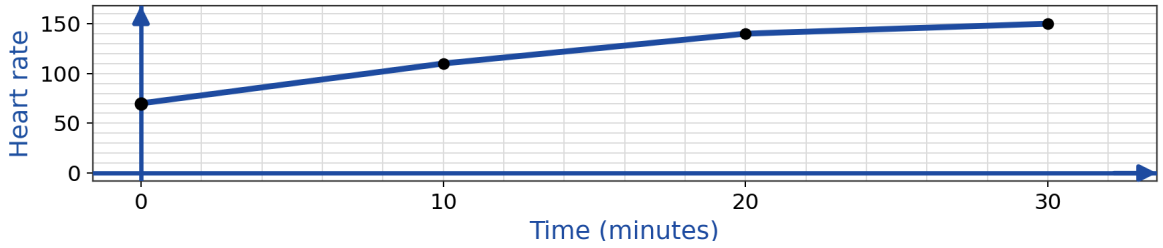
B Flower

C Root

D Stem

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18 **The graph shows a student's measured heart rate while exercising. The heart rate after 20 minutes, in beats per minute, is**



ANSWER

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19 **Which tissue type includes blood, bone, cartilage, and fat?**

A Muscle tissue

B Nervous tissue

C Connective tissue

D Epithelial tissue

Understand It with Pulse | Flag a mistake

20 **Which organ system breaks down food and absorbs nutrients into the blood?**

A Excretory system

B Endocrine system

C Skeletal system

D Digestive system

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21 **A doctor suggests a heart transplant for a patient whose heart can no longer pump enough blood. A societal issue raised by transplants is**

A how donor organs are allocated fairly among patients waiting

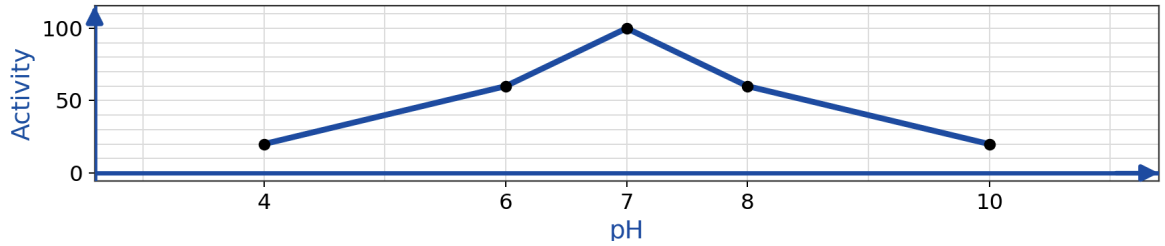
B the colour of the donor heart

C the mass of the donor heart

D whether the heart beats during surgery

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22 **The graph shows measured enzyme activity at different pH values. The pH at which enzyme activity is highest is**



ANSWER

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23 **Stomata in a leaf mainly allow**

A minerals to be stored in the stem

B water to move from roots to leaves

C gases to move in and out of the leaf

D sugars to move from leaves to roots

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24 **A researcher tests a new skin graft material on two groups of lab samples. One group gets the new material and the other gets the standard treatment. The standard treatment group is the**

A experimental group

B dependent variable

C independent variable

D control group

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25 **Which ethical question is most relevant to research using embryonic stem cells?**

A What is the moral status of the early embryo?

B What colour are stem cells under a microscope?

C How fast do stem cells divide in a dish?

D What is the mass of a stem cell?

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ANSWER KEY

1. A
2. B
3. 9
4. C
5. D
6. A
7. B
8. 40
9. 2314
10. C
11. D
12. 6
13. B
14. C
15. 46
16. D
17. A
18. 140
19. C
20. D
21. A
22. 7
23. C
24. D
25. A

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