

SA-1

9th Class Biological Science – Full Answer Key (AP SCERT)

ANSWER KEY – SECTION A (MCQs)



- 1 B) Nucleoid
- 2 D) Both A & R correct; R explains A
- 3 C) Deshelled egg + saline water + beaker
- 4 C) Incorrect – Smooth ER stores proteins
- 5 B) 1, 2 & 3
- 6 C) Parenchyma
- 7 A) They would not need a host
- 8 C) Reduce heat loss & act as insulator
- 9 D) Meghana & Manoj
- 10 D) a & c

SECTION – B (3×2 = 6 Marks)

11) Measures to strengthen cardiac muscle 

- Regular aerobic exercise (walking, jogging)
- Deep breathing & yoga
- Healthy diet (low fat, high fiber)

12) Prokaryotic vs Eukaryotic Cells 

Feature.	Prokaryotic Cell	Eukaryotic Cell
Nucleus	 Absent	 Present
Organelles	Few.	Many membrane-bound
Size	Small	Large

SECTION – C (2×4 = 8 Marks)

13) Name the following 🧑🏻

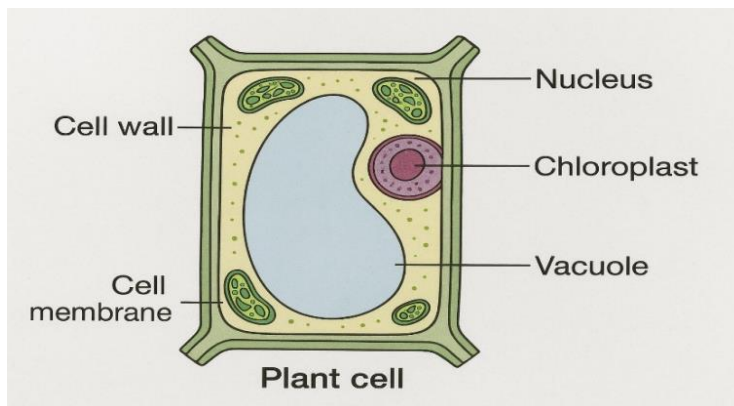
i) Tissue lining inner mouth → Stratified squamous epithelium

ii) Fluid connective tissue → Blood 🩸

14) Four daily-life situations using diffusion 🧠

- Smell of perfume spreading
- Ink spreading in water
- Gas exchange in lungs
- Aroma of food spreading from kitchen

15) Neat labelled diagram of Plant Cell 🌿



SECTION – D (2×8 = 16 Marks)

16 A) Any 4 cell organelles & functions 🧬

Organelle	Function
Nucleus	Controls activities
Mitochondria	Energy production
Ribosomes	Protein synthesis
Vacuole	Storage

OR

16 B) Muscle Tissue Types 🍌

Type	Features	Location
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Skeletal	Voluntary, striated	Arms, legs
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Smooth	Involuntary, spindle shaped	Stomach, . intestine
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Cardiac.	Involuntary, branched	Heart ❤️
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17 A) Procedure to observe plant tissues under microscope 🔬

- Take a fresh onion bulb and remove its dry outer scales.
- Gently peel a thin, transparent layer (epidermal peel) from the inner side of the onion with the help of forceps.
- Place the peel on a clean glass slide.
- Add a few drops of water to prevent the peel from drying.
- Now add 1–2 drops of safranin stain to colour the cells for clear visibility.
- Allow the stain to act for about one minute.
- Drain out the extra stain carefully without disturbing the peel. Slowly lower a coverslip on the peel using a needle to avoid air bubbles.
- Remove excess water or stain around the coverslip using blotting paper or tissue.
- Place the slide on the stage of the microscope and adjust the mirror for proper light.
- First observe the peel under low power to locate the cells.
- Then observe under high power to clearly identify the cell wall, nucleus, cytoplasm, and other structures of plant tissues.

OR

17 B) Meristematic Tissue 🌱

Definition: Tissue with actively dividing cells.

Types:

- Apical – root & shoot tips
- Intercalary – at internodes
- Lateral – causes secondary growth

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