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SUMMATIVE ASSESSMENT – TERM II, 2026–27

BIOLOGY – ANSWER KEY (English Medium)

SET 1

Standard: IX **Time: 1½ Hours**

Total Score: 40

Scores for each part are shown in brackets. Accept any other correct answer.

Q. No.	Answer / Scoring indicators	Score
1	a) Both are true and the reason explains the statement.	1
2	b) Nephron	1
3	a) P – iii, Q – iv, R – ii, S – i	1
4	b) i and ii are correct	1
5	a) Osmosis (endosmosis) (1) b) The soil solution becomes more concentrated than the cell sap, so water moves out of the root cells (exosmosis) (1)	2
6 A	a) Transpiration (1) b) Helps the upward movement of water and minerals (transpiration pull); cools the plant; removes excess water (any two) (1)	2
6 B	Xylem: conducts water and minerals from roots to leaves (1) Phloem: carries food (sugars) from leaves to other parts (1)	2
7	a) Systolic pressure – pressure in the arteries when the ventricles contract (1) b) Reduce salt and fatty food, exercise regularly, avoid smoking and alcohol, reduce stress, control weight (any two) (1)	2
8	Blood passes through the heart twice: once in pulmonary circulation (heart → lungs → heart) and once in systemic circulation (heart → body → heart). Oxygenated and deoxygenated blood do not mix. (2)	2
9	a) When both kidneys fail to function (kidney failure) (1) b) Diffusion of wastes from blood through a semi-permeable membrane into the dialysing fluid (1)	2
10 A	Skeletal: voluntary, striated, cylindrical cells with many nuclei, attached to bones, get tired. Cardiac: involuntary, striated and branched, work without rest, found only in the heart. (Any two differences) (2)	2
10 B	a) Bones lose calcium and become weak, porous and break easily (1) b) Food rich in calcium and vitamin D, sunlight, regular exercise (any one) (1)	2
11	a) Ammonia is highly soluble and toxic; fishes have plenty of water to dilute and remove it quickly (1) b) Uric acid needs very little water to remove, so water is conserved; it also keeps body weight low for flight (1)	2
12	a) X – Cartilage; Y – Synovial fluid (1) b) Acts as a lubricant and reduces friction between the bones (1) c) Ligament (1)	3
13 A	a) C – Glomerulus; D – Bowman's capsule (1) b) The wide afferent and narrow efferent arterioles create high pressure in the glomerulus, which helps ultrafiltration (1) c) Loop of Henle (1)	3
13 B	a) Ultrafiltration, selective reabsorption, tubular secretion (1)	3

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	b) Glomerulus / Bowman's capsule (1) c) Glucose, amino acids, water, salts (any two) (1)	
14	a) Right ventricle (1) b) Pulmonary vein (1) c) Left ventricle (1)	3
15	a) Part of the plasma with dissolved substances and white blood cells seeps out of capillaries into tissue spaces (tissue fluid) and enters lymph vessels (1) b) Exchange of materials between blood and cells; returns tissue fluid to blood; absorbs fat from the intestine; defence against germs (any two) (1) c) Lymph nodes filter lymph and destroy germs; they produce lymphocytes (1)	3
16 A	Storing wastes in leaves and bark that fall off; through stomata (O_2, CO_2, water vapour); storing as resins, gums, latex; removing into the soil through roots (any three) (3)	3
16 B	a) Pressure developed in the root cells that pushes water upward (1) b) Loss of water from leaves pulls the water column up through the xylem (1) c) Cohesion (attraction between water molecules) and adhesion to xylem walls (1)	3
17	a) Osteoblasts (1) b) Calcium and phosphorus (calcium phosphate) (1) c) Produces blood cells (1)	3
18 A	a) Anaerobic respiration (1) b) Lactic acid (1) c) Mitochondria (1) d) Glucose + Oxygen → Carbon dioxide + Water + Energy (1)	4
18 B	a) Carbon dioxide and water (in the presence of sunlight and chlorophyll) (1) b) Grana (thylakoids) (1) c) Oxygen (1) d) Starch is insoluble, compact and does not affect osmosis, so it is easy to store (1)	4

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