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Term Examination

2026 – 2027

Grade: 8 **Subject:** Biology

Time: 2½ hours **Maximum Marks:** 80

Section A

1. **Select the correct answers to the questions from the given options. (Do not copy the questions, write the correct answer only).**

(i) What changes does the parasympathetic nervous system bring about in the body? [1]

(a) It dilates the pupil of the eyes, constricts the vessels of the skin and accelerates the heart rate fast

(b) It controls all higher mental activities such as intelligence, consciousness, will power and thinking

(c) It causes constriction of the pupil of the eyes, dilation of blood vessels and slowing of the heart rate

(d) It controls all reflex actions below the neck and the messages between the limbs and the brain

(ii) Cortical hormones from the adrenal cortex help the body adapt to which of the following kinds of stresses? [1]

(a) Stresses such as extreme heat, cold and infections that the body has to endure

(b) Stresses such as sudden danger and fear that demand an instant body response

(c) Stresses such as low blood sugar that need a quick supply of glucose to muscles

(d) Stresses such as a lack of iodine that enlarges the thyroid gland in the neck

(iii) In pig farming, the animal fat obtained from pigs that is used as a cooking medium and in the manufacture of soaps and lubricants is known as: [1]

(a) Pork

(b) Bacon

(c) Ham

(d) Lard

(iv) Budding is described as a common method of reproduction in which of the following animals? [1]

(a) Amoeba

(b) Planaria

(c) Starfish

(d) Hydra

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(v) Why are capillaries described as the "principal sites of exchange" in the body? [1]

(a) Because their thick muscular walls let oxygen and nutrients pass from the blood into the tissues

(b) Because blood is exchanged there between arteries and veins, mixing oxygenated and deoxygenated blood

(c) Because only oxygen and carbon dioxide are exchanged there, while nutrients pass through the veins

(d) Because water, oxygen, carbon dioxide, nutrients and wastes are exchanged there between blood and tissues

(vi) In which Indian state is the Jim Corbett National Park located and which animal is it especially known for? [1]

(a) It is located in Gujarat and is famous for the lion that lives in its forest

(b) It is located in West Bengal and is famous for the rhinoceros that lives in its forest

(c) It is located in Uttarakhand and is famous for the tiger that lives in its forest

(d) It is located in Kerala and is famous for the leopard that lives in its forest

(vii) What does the somatic nervous system connect? [1]

(a) It connects the autonomic nervous system to the various endocrine glands of the human body

(b) It connects the central nervous system to the organs, the muscles and the skin of the body

(c) It connects the brain only to the spinal cord through one thick cable made of nerve fibres

(d) It connects the cranial nerves to the spinal nerves through a network of fibres in the body

(viii) During their menstrual cycle, girls are advised to take special care of which of the following? [1]

(a) Diet

(b) Cleanliness

(c) Sleep

(d) Physical exercise

(ix) How does sweet potato reproduce vegetatively through its roots? [1]

(a) Its roots break into fragments that each regrow into a new individual

(b) Its roots produce spores on their underside that germinate to form new plants

(c) Its roots develop adventitious buds in their margins similar to Bryophyllum

(d) Its many large swollen fleshy roots each store food and grow new plants

(x) A single ejaculation of semen in humans contains approximately how many sperms? [1]

(a) About 200 to 400 sperms

(b) About 2,000 to 4,000 sperms

(c) About 20 to 40 million sperms

(d) About 20,000 to 40,000 sperms

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(xi) Assertion (A): Most fungi are called saprophytes. [1]
Reason (R): Fungi possess chlorophyll and prepare their own food by photosynthesis.

(a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true but R is not the correct explanation of A
(c) A is true but R is false
(d) A is false but R is true

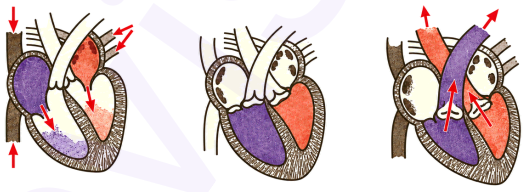
(xii) Assertion (A): Diabetes and heart attack are examples of communicable diseases. [1]
Reason (R): Non-communicable diseases are not caused by any germ and cannot spread from an infected person to a healthy one.

(a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true but R is not the correct explanation of A
(c) A is true but R is false
(d) A is false but R is true

(xiii) Assertion (A): A tick that sucks the blood of a dog for days is a parasite and not a predator. [1]
Reason (R): A predator catches and kills its prey for food, while a parasite lives on its host and gains food at the host's cost.

(a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true but R is not the correct explanation of A
(c) A is true but R is false
(d) A is false but R is true

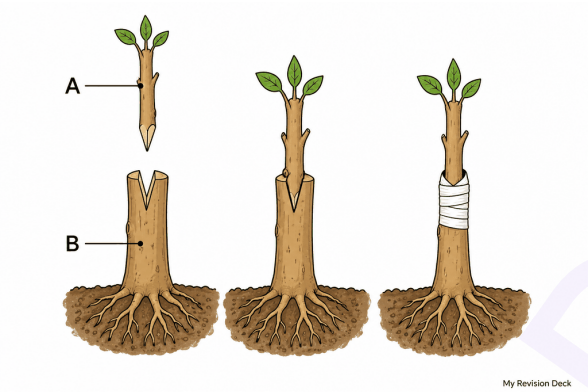
(xiv) Observe the three-stage diagram showing the working of the heart through one full beat. Which of the given options best describes the state of the AV (atrio-ventricular) valves in stage A? [1]



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(a) The AV valves are closed, and the semi-lunar valves are open as the ventricles contract
(b) The AV valves are open, allowing blood to flow from the atria into the ventricles
(c) The AV valves are closed, as both ventricles are already full of blood
(d) The AV valves are open, allowing blood to flow back from the ventricles to the atria

(xv) Observe the diagram of grafting, in which the upper part is labelled 'A' and the lower part is labelled 'B'. Which of the given options best identifies A and B and explains why their cambium layers must come into close contact? [1]



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(a) A is the stock and B is the scion; their cambium layers must contact so the scion can absorb water from the soil below

(b) A is the scion and B is the stock; their cambium layers must contact so that growth may continue in the grafted plant

(c) A is the explant and B is the callus; they must contact so the explant can absorb nutrients from the callus medium

(d) A is the rootstock and B is the bud; they must contact so the bud can produce flowers and seeds independently

2. **(i) Name the following:**

(a) The long process arising from the cell body of a neuron. [1]

(b) The ailment in infants caused by insufficient thyroxine that results in physical and mental retardation. [1]

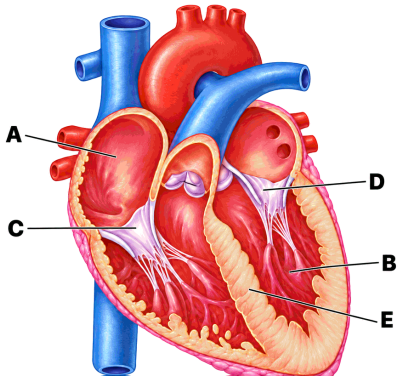
(c) The flattened part of the stalk (pedicel) from which the petals and other floral parts arise. [1]

(d) The cell formed when the nucleus of a sperm fuses with the nucleus of an egg during fertilisation. [1]

(e) The virus that causes AIDS by weakening the body's immune system. [1]

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(ii) Label the parts of the human heart shown in the internal structure diagram.



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(a) Label A [1]

(b) Label B [1]

(c) Label C [1]

(d) Label D [1]

(e) Label E [1]

(iii) Arrange and rewrite the terms in each group in the correct order to be in a logical sequence beginning with the term that is underlined:

(a) Food stored as starch / Glucose produced in photosynthesis / Food reaches all parts of the plant including the roots / Food transported as sucrose solution in phloem [1]

(b) Androgens make hair start growing on the face / Testes produce male sex hormones called androgens / The boy soon finds himself having to shave / FSH from the pituitary gland activates the androgens [1]

(c) Boy is later injected with smallpox virus and shows no sign of disease / Jenner observes that milkmaids with cowpox never get smallpox / Pasteur confirms findings and develops vaccines for anthrax and cholera / Cowpox material is introduced into body of an eight-year-old boy [1]

(d) Branch develops roots at node / Ring of bark removed at node / Lower branch bent to ground / Branch covered with soil and held down [1]

(e) Brain records information / Hands hold the plate / Eyes look at the food / Fingers push food into mouth [1]

(iv) Choose the odd one out from the following terms and name the category to which the others belong:

(a) Cell wall / Cell membrane / Nucleus / Sieve plate [1]

(b) Murrah / Mehsana / Sahiwal / Surti [1]

(c) Blood / Tissue fluid / Lymph / Saliva [1]

(d) Pollination of flowers by animals / Seed dispersal by animals / Fungus–alga partnership / Predation [1]

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(e) Marigold / Maize / Dahlia / Salvia [1]

(v) Match the items given in Column A with most appropriate ones in Column B and rewrite the correct matching pairs: [5]

Column A	Column B
(a) Tracheids	(i) Elongated dead xylem cells with tapering ends
(b) Semi-permeable membrane	(ii) Conducting system of a plant consisting of xylem and phloem
(c) Root hairs	(iii) End walls between phloem tubes, through which food passes
(d) Sieve plates	(iv) Osmosis takes place across it
(e) Vascular bundle	(v) Epidermal outgrowths giving a large surface area

Section B

(Attempt all questions from this Section.)

3. (i) What kind of reflexes are salivation when hungry, swallowing and peristalsis? [1]

(ii) The heart is the pumping organ of the human body.

(a) What are cardiac muscles and what is their unique feature? [1]

(b) What role does the SA node play in the heart? [1]

(iii) Why are micronutrients important for plants despite being needed in very small amounts? Give any one example with its deficiency symptom. [2]

(iv) State the two roles of the vagina in the human female. [2]

(v) Soil is much more than ground beneath our feet — it sustains a community of life.

(a) Name two mineral nutrients found in soil that plants need. [1]

(b) Name two animals that use soil as their dwelling place. [1]

(c) Name one kind of microorganism found in soil. [1]

4. (i) Define the term 'Microbes'. [1]

(ii) Several changes take place in a flower after fertilisation.

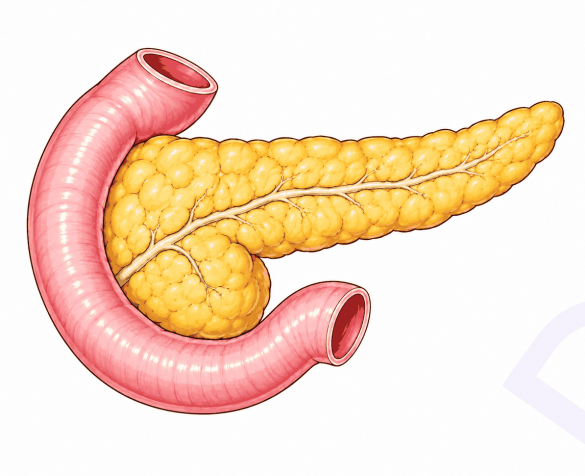
(a) What does the ovule develop into after fertilisation? [1]

(b) What happens to the petals and other floral parts after fertilisation? [1]

(iii) State any four steps to maintain a healthy environment that prevents the spread of communicable diseases. [2]

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(iv) Study the diagram and answer the questions that follow.

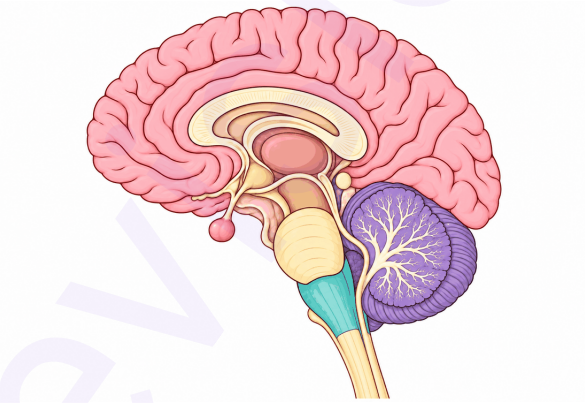


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(a) Identify the gland shown in the diagram and name the cells in it that secrete hormones. [1]

(b) Name the two principal hormones secreted by these cells and state which one lowers blood sugar. [1]

(v) Study the image and answer the questions that follow.



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(a) Identify the largest part of the brain shown in the diagram and state its main function. [1]

(b) Identify the smaller part below the largest part of the brain and state its main function. [1]

(c) Identify the lowest part of the brain in the diagram and state its main function. [1]

5. (i) What was agronomic technology in the context of the Green Revolution, and what were its effects on crop produce? [1]

(ii) After fertilisation the fertilised egg travels from the oviduct to the uterus, where it embeds in the uterine wall.

(a) What is the state of the fertilised egg by the time it reaches the uterus? [1]

(b) What is the name of the process by which the embryo fixes itself in the uterine wall, and what state does it produce? [1]

(iii) State any four harmful effects of drinking alcohol on the human body. [2]

(iv) How does binary fission differ from multiple fission in the number of daughter cells formed? Give one example of an organism for each. [2]

(v) Draw a neat labelled diagram showing the distribution of the main lymph vessels and lymphatic organs in the human body. [3]

6. (i) Define the term 'Transpiration'. [1]

(ii) Adolescence and puberty are two closely related terms.

(a) What is the meaning and origin of the term "adolescence"? [1]

(b) What is puberty, and at what age does it usually start in girls and in boys? [1]

(iii) Differentiate between a food chain and a food web. [2]

(iv) What is organic farming? What is its main aim? [2]

(v) Each of the three forces that cause the ascent of sap originates from a different part of the plant or a different physical property.

(a) How is root pressure developed in a plant, and how does it help the ascent of sap? [1]

(b) What physical properties of water molecules give rise to capillary force? [1]

(c) In which tissue of the plant is transpirational pull created, and what kind of force is it? [1]

********** End of paper **********

Portions covered in this paper: Transport in Plants, Ecosystems, Circulatory Systems, Nervous System, Endocrine Systems, Diseases, Food Production, Reproduction in Plants, Reproduction in Humans

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