Answer Key 6.3

Marks - 25

Case study based questions

10th Science

Life Processes

Passage - 1 **5 Marks**

While explaining the concept of respiration to the students, Mr. Khan took two different examples of organisms where first organism 2 ATP molecules are produced whereas in the respiration system of organism two, 38 ATP molecules are produced

Q1. (2) Second organism

Q2. (1) First organism

Q3. (2) Second organism

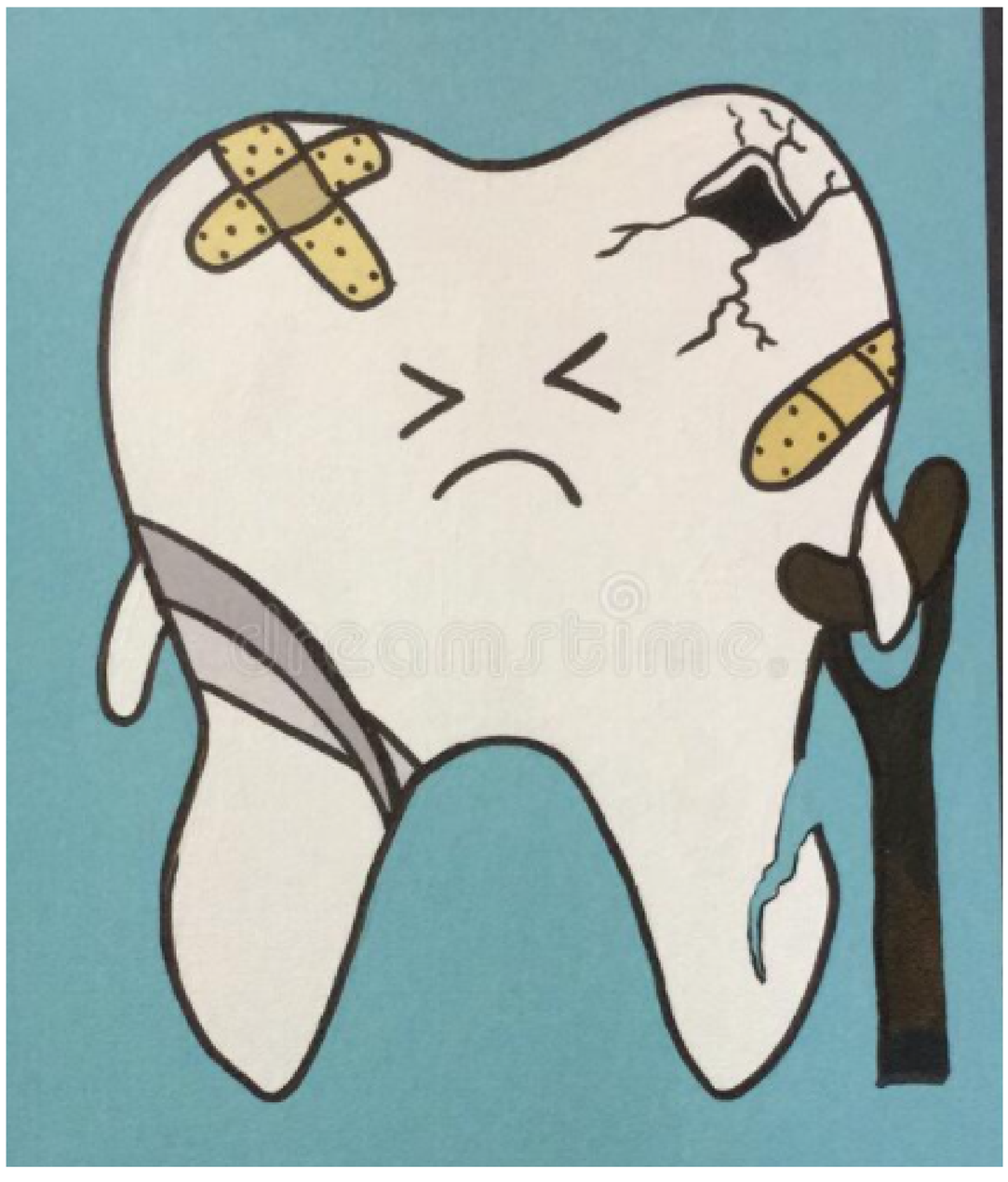
Q4. (2) Adenosine tri-phosphate

Q5. (4) Archaea

Passage - 2 **5 Marks**

Answer Key 6.3

Marks - 25



When a person eats sugary food, the bacteria present in his mouth act on the sugar producing acids. The acid first dissolves the calcium salts from the top part of the teeth and then from its middle part damaging the teeth. The damages utimately reach the lower part of the tooth which contains nerves and blood vessels ultimately causing toothache.

Q1. (1) Enamel

Q2. (2) Dentine

Q3. (3) Pulp cavity

Q4. (4) All of the above

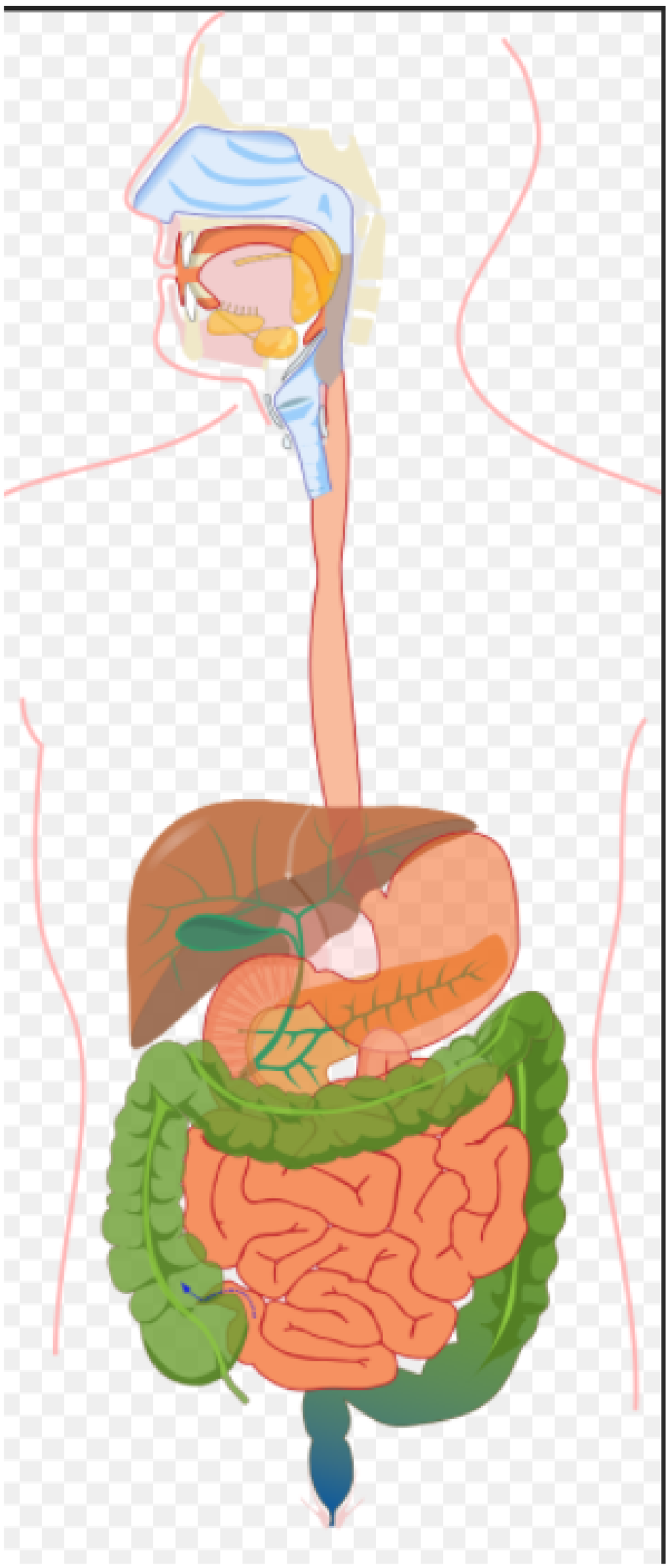
Q5. (2) Bacterial infections

Answer Key 6.3

Marks - 25

Passage - 3

5 Marks



Answer Key 6.3

Marks - 25

The partially digested food from the stomach goes to next organ for further digestion and enters a long and narrow organ called small intestine which re-cieves the secretions from different glands. Liver secretes a greenish-yellow liquid. Pancreas secrete pancreatic juice which contains different enzymes which on a note help in the process of digestion

Q1. (4) Glycogenesis and glycogenolysis

Q2. (3) Mixed glands

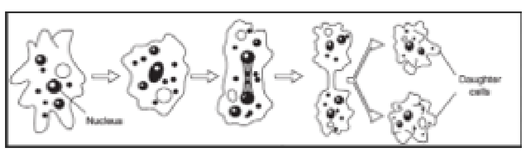
Q3. (3) Both (a) and (b)

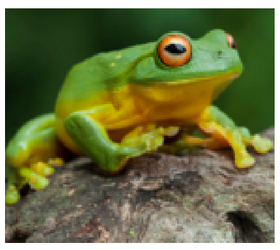
Q4. (4) All of the above

Q5. (4) Enterokinase

Passage - 4

5 Marks



During the science lab, Mr. Khan was teaching about the different breathing organs used by different organisms according to their surroundings. Animal A always lives in water and has gills for breathing. Animal B can stay in water as well as on land and can breathe both, through moist skin and lungs. Animal

---

Answer Key 6.3

Marks - 25

C lives in soil and can only breathe through its skin. Animal D lives on land and breathes through spiracles and tracheae. Animal E breathes through its cell membrane.

Q1. (1) E

Q2. (2) B

Q3. (3) A

Q4. (1) D

Q5. (4) C

Passage - 5 **5 Marks**

Most living things need oxygen to obtain energy from food. The oxygen reacts with food molecules and that is how energy is obtained which is stored in the form of ATP molecules in the cells. This energy can be used anywhere the body wants to do so. The process of releasing energy from food is called respiration.

Q1. (2) Adenosine tri-phosphate

Answer Key 6.3

Marks - 25

Q2. (1) Catabolic process

Q3. (1) Energy is released and stored in the form of ATP

Q4. (2) Chemical energy

Q5. (3) 2

Answer Key 6.4

Marks - 25

Case study based questions

10th Science

Life Processes

Passage - 1 **5 Marks**

During a science lab activity, some sugar solution is taken in a test tube and a little amount of a substance is taken in powdered formed named as P. The test tube is allowed to stay still for some-time while the top is covered. When the top is removed from the cork, a characteristic smell is observed and a gas Z evo-lution also takes place. The gas evolved can extinguish a burning matchstick.

Q1. (1) Yeast

Q2. (2) Ethanol

Answer Key 6.4

Marks - 25

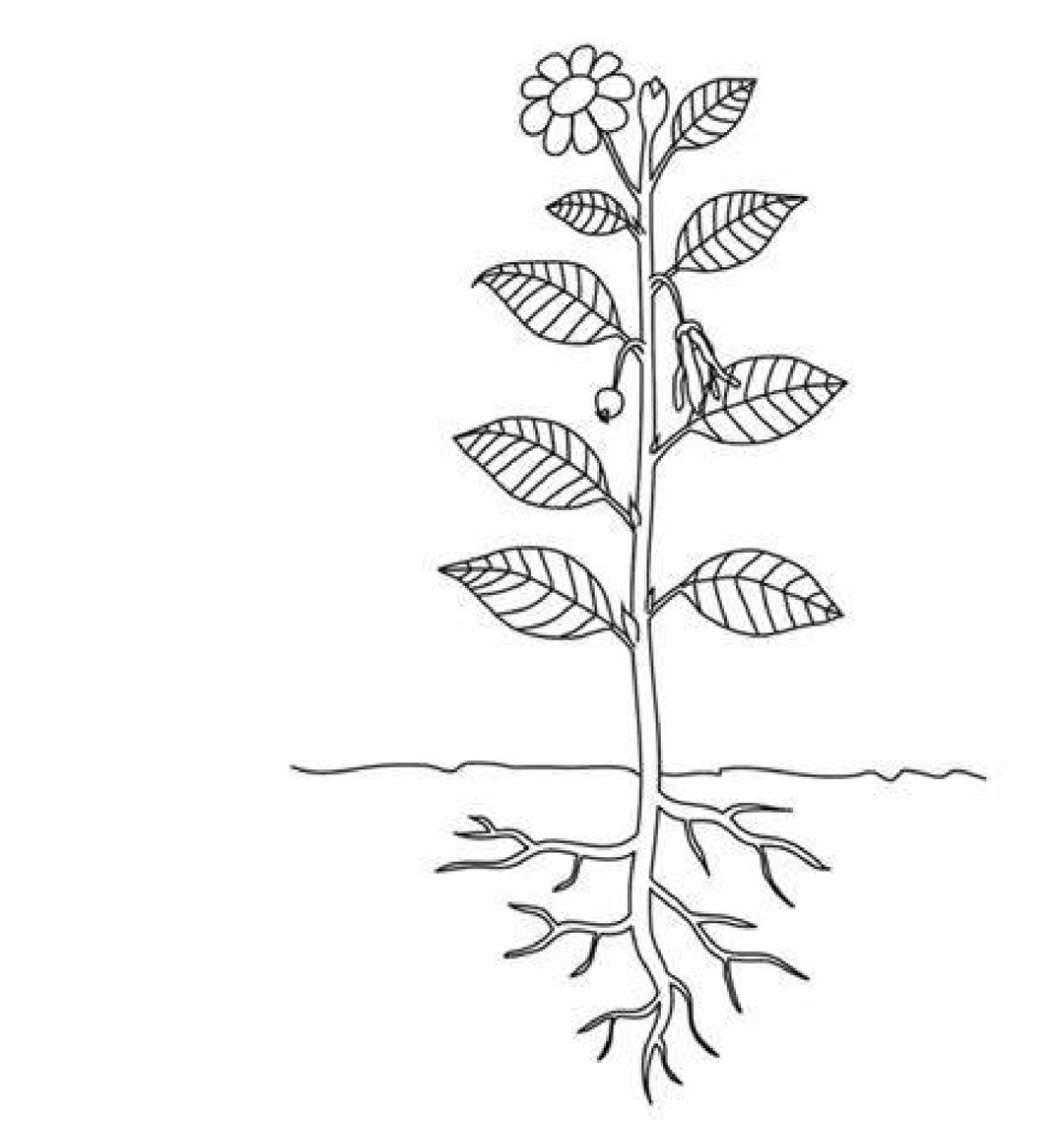
Q3. (1) Carbon dioxide gas

Q4. (3) Fermentation

Q5. (2) Anaerobic respiration

Passage - 2

5 Marks



The process of transportation occurs in every living organism. Transportaion system in plants consists of two kinds of tissue X and Y. The two issues have different components on a further basis which perform a specified function. These components work differently on the basis that whether the plant is flowering or not.

Q1. (1) Phloem

Q2. (1) Sucrose prepared by leaves

Answer Key 6.4

Marks - 25

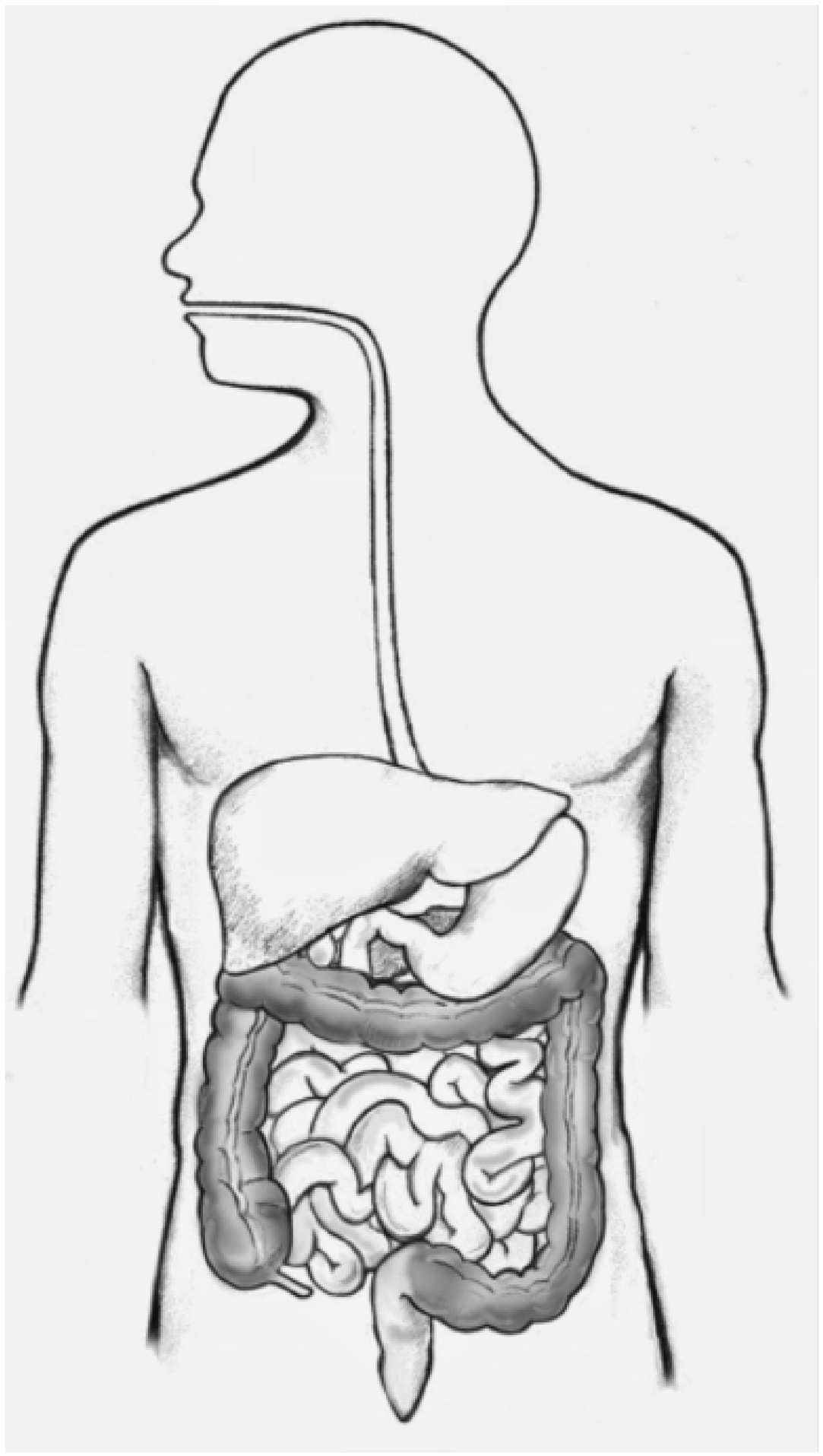
Q3. (2) Water

Q4. (2) Tracheids and vessels

Q5. (4) Both tracheids and vessels

Passage - 3

5 Marks



Answer Key 6.4

Marks - 25

In the human body, we have a pair of bean-shaped organ towards the back, just above the waist. The waste product urea is formed which is brought into the another organ through blood. The numerous tiny filters present in the bean-shaped organs clean the dirty blood by removing the waste products in the blood. The clean blood goes for circulation through another vein.

Q1. (2) Kidney

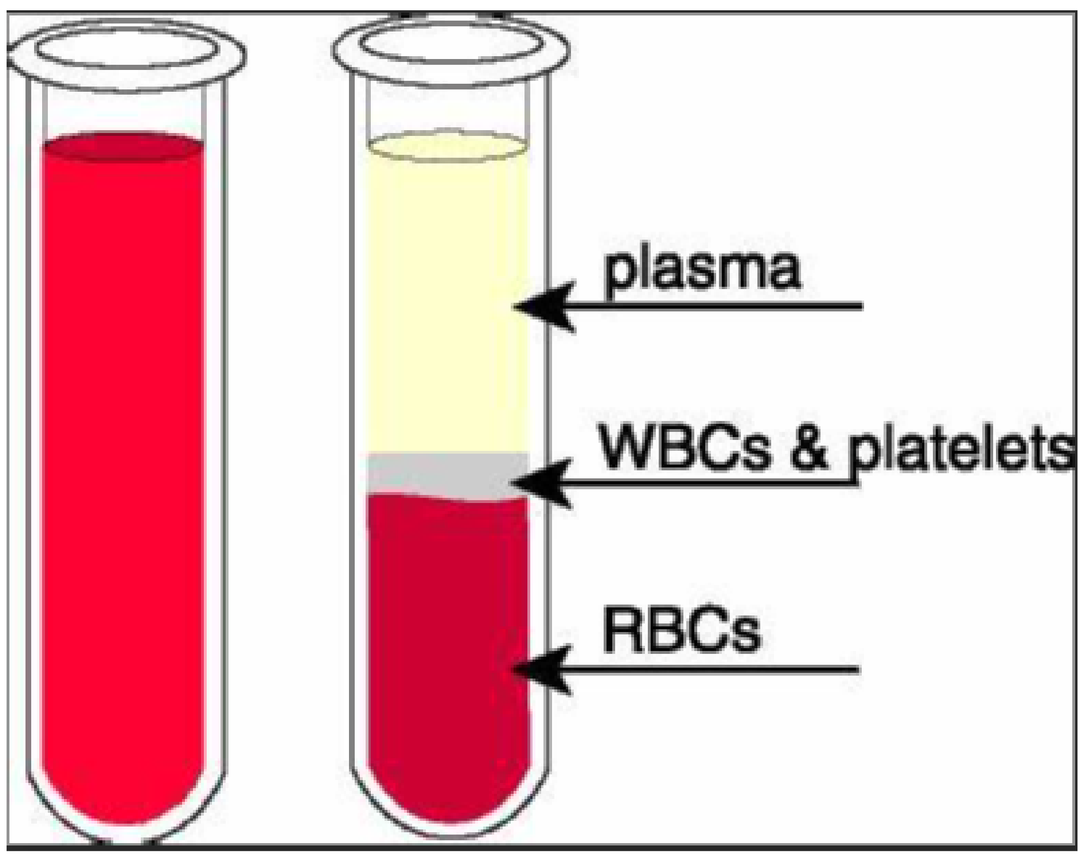
Q2. (3) Lungs

Q3. (1) Renal artery

Q4. (1) Nephrons

Q5. (2) Renal vein

Passage - 4 **5 Marks**



Blood is a fluid connective tissue composed of 55% plasma and 45% formed elements including WBCs, RBCs, and platelets. Since these living cells are suspended in plasma, blood is known as a fluid connective tissue and not just

---

fluid. Provides oxygen to the cells. Blood absorbs oxygen from the lungs and transports it to different cells of the body.

Q1. (4) All of the above

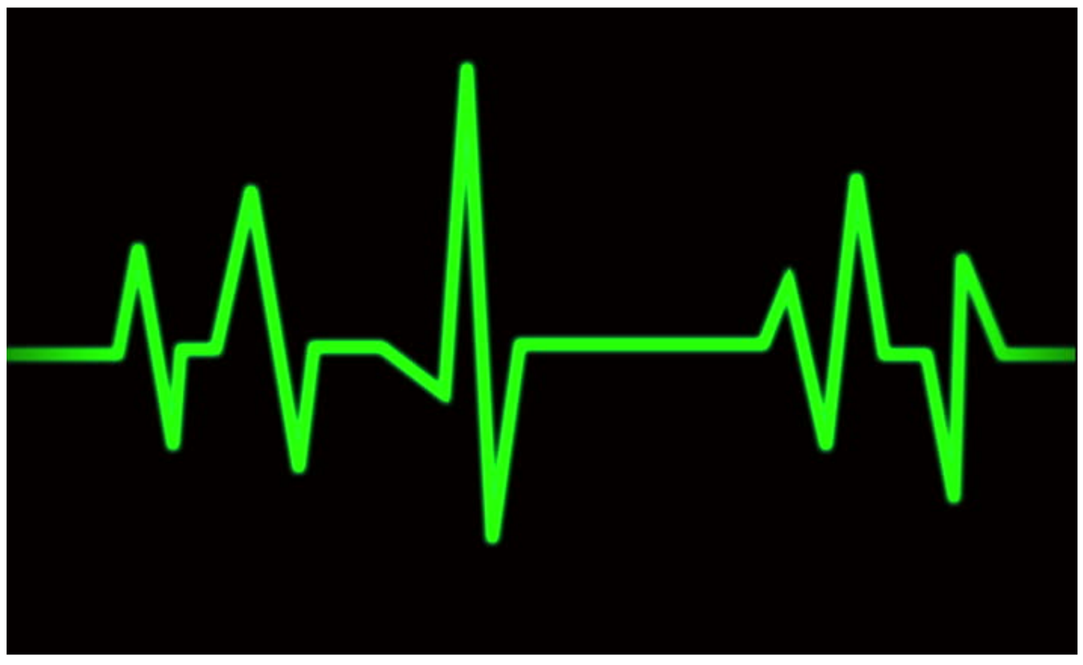
Q2. (4) 120 days

Q3. (1) Less than 14 days

Q4. (2) To carry oxygen to different parts of the body

Q5. (3) Due to the presence of haemoglobin

Passage - 5 **5 Marks**



The heart beats rhythmically throughout one's life. The periodic contraction and relaxation of the heart is called the heartbeat. The normal human heart-beat is 70-72 per minute. The sounds made by heart are the heartbeats, which can be heard more clearly and loudly using different methods. The human heart pumps about 5 litres of blood per minute.

Q1. (2) Stethoscope

Answer Key 6.4

Marks - 25

Q2. (1) Bradycardia

Q3. (2) Tachycardia

Q4. (3) Initiation of the heart beat

Q5. (2) Cardian massage
