



ST. JOSEPH'S COLLEGE, PRAYAGRAJ

FINAL EXAMINATION 2024

CLASS - IX

SUBJECT- BIOLOGY

Max. Marks: 80

Time: 2 Hrs

Answers to this paper must be written on the paper provided separately.

You will not be allowed to write during first 15 minutes.

The time given at the head of the paper is the time allowed for writing the answers.

Section A is compulsory. Attempt any four questions from section B.

The intended marks for questions or parts of questions are given in brackets [].

SECTION -A

(Attempt all questions from this section)

QUESTION 1

Select the correct answers to the questions from the given options: [15]

i) The given question consists of two statements-Assertion A and Reason R.

Assertion A: The colouration of skin is due to a pigment melanin.

Reason R: It protects the skin from ultra violet sunrays.

- 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.

ii) Mammary glands are modified

- a) Sweat glands
- b) Gastric glands
- c) Tear glands
- d) Sebaceous glands

iii) The end product of breakdown of glucose in anaerobic respiration in animals.

- a) Ethanol only
- b) Ethanol and carbon dioxide
- c) Lactic acid and carbon dioxide
- d) Lactic acid only

iv) The salivary gland present below the tongue.

- a) Parotid gland
- b) Sublingual gland
- c) Sub mandibular gland
- d) None of the above.

v) It prevents the food from entering the trachea during swallowing.

- a) Epiglottis
- b) Matrix
- c) Pylorus
- d) Vitiligo

vi) The external surface of the bone is covered by a membrane called

- a) Centrum
- b) Atlas
- c) Periosteum
- d) Axis

vii) A single walled spherical body composed mainly of RNA.

- a) Lysosomes
- b) Ribosomes
- c) Dictyosomes
- d) Centrosome



- viii) The knee joint is an example of
- Immovable joint
 - Partially movable joint
 - Pivot joint
 - Synovial joint
- ix) The vital capacity of lungs of a normal human adult is
- 1000 ml
 - 4500 ml
 - 500 ml
 - 1500 ml
- x) The variously coloured plastids found in plant cells.
- Leucoplast
 - Chromoplast
 - Chloroplast
 - None of the above
- xi) The process of conversion of excess glucose into glycogen is called
- Glycolysis
 - Glycogenolysis
 - Glycogenesis
 - Deamination
- xii) The brain box is made up of ____ bones.
- 8
 - 33
 - 14
 - 12
- xiii) The respiratory center is stimulated by the _____ content of the blood.
- Carbon dioxide
 - Oxygen
 - Carbon mono-oxide
 - None of the above
- xiv) The organelle present in animal cells only.
- Cell wall
 - Plastid
 - Centrosome
 - Prominent vacuole
- xv) The structure covered by C shaped rings of cartilage.
- Trachea
 - Pharynx
 - Larynx
 - Diaphragm



QUESTION 2

A) Name the following:

[5]

- i) The colouring pigment dissolved in cell sap.
- ii) The deficiency disease caused due to lack of vitamin D.
- iii) The enzyme responsible for converting starch into maltose.
- iv) A large hole in the cranium that allows the passage for spinal cord.
- v) The opening between Stomach and Intestine that regulates the passage of chyme.

B) Match the following:

[5]

COLUMN A	COLUMN B
1. Acetabulum	Pleura
2. Glenoid Cavity	Peristalsis
3. Ceruminous gland	Thigh bone
4. Meibomian gland	Humerus
5. Lungs	Eyelid
	Auditory canal
	Ileum

C) Find the odd one out and mention the category to which the other three belong:

[5]

1. Steapsin, pepsin, trypsin, amylopsin
2. Plastid, nucleus, Golgi body, granules
3. Vitamin A, Vitamin D, Vitamin C, Vitamin K
4. Glucose, Sucrose, maltose, lactose
5. Humerus, radius, femur, ulna

D) Arrange in proper order starting from the underlined word:

[5]

1. Colon, Caecum, rectum, anus.
2. Trachea, Bronchi, Larynx, pharynx
3. Oesophagus, Mouth, Intestine, Stomach.
4. Gall bladder, salivary gland, liver, pancreas
5. Incisors, Premolars, molars, canines.

E) Give scientific reasons for the given statements:

[5]

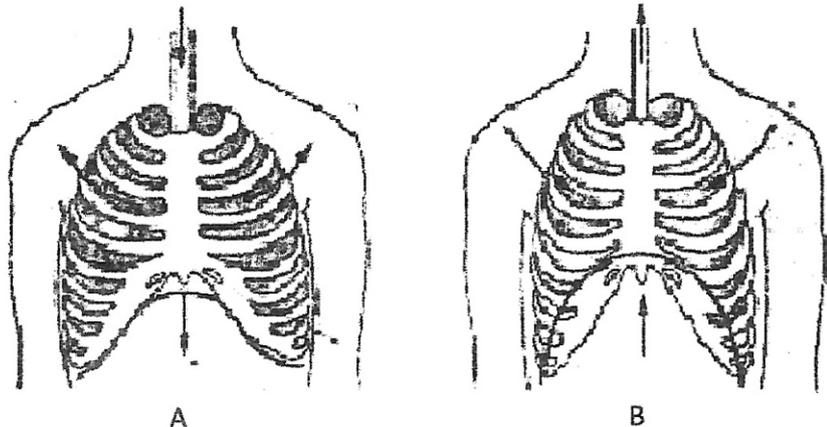
1. We shiver when it is very cold.
2. We vomit when stomach is overloaded with food.
3. Acne is a common problem in teenagers.
4. We experience goose flesh during winters.
5. One must prefer eating fruits over fruit juices.

SECTION B

(Attempt any 4 questions)

QUESTION 3

- A. Define hygiene. [1]
- B. Differentiate between Glycolysis and Krebs cycle. [2]
- C. Give the exact location of i) Pancreas ii) Coccyx. [2]
- D. Mention two functions of HCl present in gastric juice. [2]
- E. Observe the diagram and answer the following questions: [3]



- i) What is the role of diaphragm during inhalation and exhalation?
- ii) What happens to ribcage during inhalation and exhalation?
- iii) When does the volume of thoracic cavity increase and decrease?

QUESTION 4

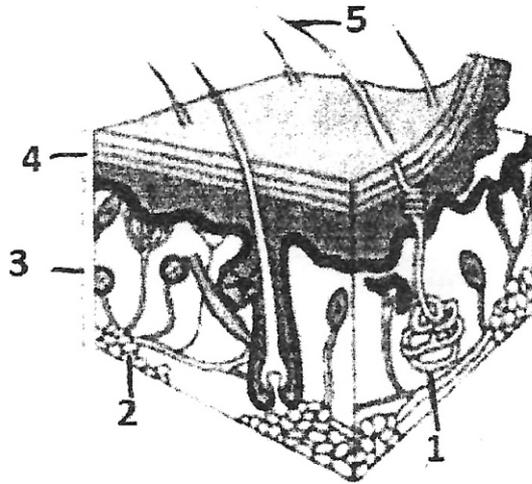
- A. Define malnutrition. [1]
- B. Differentiate between Hypoxia and Asphyxiation. [2]
- C. Give exact location of i) Sternum ii) Pigment melanin [2]
- D. Discuss the role of given Enzymes: [2]
 - i) Trypsin ii) Lipase
- E. Draw a well labelled diagram of Intestinal Villus. [3]

QUESTION 5

- A. Define antibiotics. [1]
- B. Explain the two abnormal conditions of skin pigmentation? [2]
- C. How is disinfectant different from an antiseptic? [2]
- D. Where is bile produced and stored? Name the pigments present in Bile. [2]

E. Observe the picture and answer the given questions:

[3]



(a) Label part 1, 3, 4 and 5.

(b) Label part 2 and mention its function also.

QUESTION 6

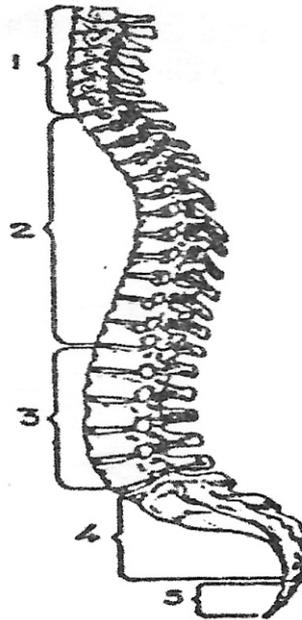
A. Define assimilation of food. [1]

B. Give difference between Kwashiorkor and Marasmus. [2]

C. Mention any two effective ways to control growth of Mosquitoes. [2]

D. What are True ribs and Floating ribs? [2]

E. Observe the diagram of vertebral column and answer the following: [3]



(a) Label parts 1, 2, 3, 4 and 5.

(b) Write the name of first vertebrae present in the neck.



QUESTION 7

- A. Define Peristalsis. [1]
- B. Differentiate between Vasoconstriction and Vasodilatation. [2]
- C. Name a vestigial organ present in intestine. In which part of large intestine is it found? [2]
- D. Why is vertebral column curved? [2]
- E. Fill in the given numbers: [3]

Element	Function	Deficiency Disease
Calcium	Constituent of bone	1
2	Regulates acid base equilibrium	Muscular cramps
Iodine	3	Goitre
Vitamin K	Clotting of blood	4
5	Promotes functioning of Capillary walls	Scurvy
Vitamin B12	Normal functioning of RBC	6

QUESTION 8

- A. Define Immunization. [1]
- B. Define Dental formula. Write the dental formula of a human adult. [2]
- C. Name the three bones present in Pelvic Girdle. Also mention the bone that joins the two hip bones. [2]
- D. Differentiate between Sebaceous gland and Sweat gland. [2]
- E. Draw a well labelled diagram showing internal structure of a tooth. [3]

*****ALL THE BEST*****