

NOTE: Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink. Cutting or filling two or more circles will result in zero mark in that question.

Q1.

12

1. Which reduces the possibility of infections on skin?
(A) Disinfectants (B) Antibodies (C) Antiseptics (D) Antibiotics
2. Algae grown in ponds produce protein per acre / year:
(A) 10 tons (B) 20 tons (C) 30 tons (D) 40 tons
3. Materials can be recycled:
(A) Plastic (B) Glass (C) Paper (D) All these
4. Changes in DNA are called:
(A) Homozygous (B) Heterozygous (C) Mutations (D) Zygous
5. Hydrogen bonds present between adenine and thymine are:
(A) 1 (B) 2 (C) 3 (D) 4
6. The male and female gametes are produced in specialized organs are called:
(A) Gametogenesis (B) Zygote (C) Placenta (D) Gonads
7. Ovule develop into:
(A) Fruit (B) Seed (C) Endosperm (D) Pollen sacs
8. They prevent dislocation of bones at joints:
(A) Collagen (B) Tendons (C) Ligaments (D) Cartilage
9. The largest endocrine gland in human body is:
(A) Adrenal gland (B) Parathyroid gland (C) Thyroid gland (D) Pancreas
10. Auditory canal ends in:
(A) Pinna (B) Cochlea (C) Eardrum (D) Pupil
11. Waste material that is removed by rubber plant is:
(A) Gums (B) Latex (C) Resins (D) Mucilage
12. Larynx is made up of:
(A) Glottis (B) Trachea (C) Cartilage (D) Alveoli

Roll No. (in Figures): (in Words):

Maximum Marks: 48

SUBJECTIVE TYPE
(PART - I)

Time Allowed : 1.45 Hours

2. Write short answers to any FIVE (5) questions:

(5×2=10)

- i) Differentiate between inspiration and expiration.
- ii) Define acute bronchitis and chronic bronchitis.
- iii) Differentiate between osmoregulation and thermoregulation.
- iv) Write the major causes of kidney stones.
- v) Define the xerophytes with example.
- vi) Write two major functions of spinal cord.
- vii) What is meant by brain stem?
- viii) Differentiate between reflex action and reflex arc.

3. Write short answers to any FIVE (5) questions:

(5×2=10)

- i) Differentiate between exoskeleton and endoskeleton.
- ii) Differentiate between compact bone and spongy bone.
- iii) What are endospores?
- iv) Explain stem tubers.
- v) Explain sporophyte generation.
- vi) What is genotype?
- vii) Differentiate between dominant allele and recessive allele?
- viii) Explain codominance.

4. Write short answers to any FIVE (5) questions:

(5×2=10)

- (i) Differentiate between abiotic and biotic components of ecosystem.
- (ii) What is meant by competition?
- (iii) What is a fermenter?
- (iv) Write the names of two vectors used in genetic engineering.
- (v) What is thymosin? Write its use.
- (vi) Define pharmacology.
- (vii) What are antibiotics? Give an example.
- (viii) What is meant by vaccines?

(PART - II)

Note: Attempt any TWO questions.

(2×9=18)

Q5. (a) Describe the structure of human kidney.

5

(b) Write a note on thyroid gland.

4

Q6. (a) What is meant by cartilage? Write its types in detail.

5

(b) Write a note on budding and fragmentation.

4

Q7. (a) What is ecosystem? Explain its components.

5

(b) Write a note on application of fermentation.

4

NOTE: Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink. Cutting or filling two or more circles will result in zero mark in that question.

Q1.

12

1. From epididymis, sperms move to a sperm duct is called:
(A) Semen (B) Seminal vesicles
(C) Seminiferous tubules (D) Vas deferens
2. Chromatin material is made up of:
(A) RNA (B) Ovule (C) Protein (D) DNA & protein
3. The expression of the genotype in the form of trait is known as:
(A) genotype (B) Phenotype (C) Dominant (D) Recessive
4. Large mammals that feed on honey:
(A) Rabbit (B) Camel (C) Badger (D) Elephant
5. In cattle, goats and deer, the foot and mouth disease is:
(A) Bacterial (B) Viral (C) Fungal (D) None of these
6. Which destroys microorganisms found on non-living objects:
(A) Disinfectants (B) Antibodies (C) Antiseptics (D) Antibiotics
7. All the alveoli constitute:
(A) Liver (B) Heart (C) Stomach (D) Lung
8. Waste material that is removed by carnivorous plants and lady finger is:
(A) Gums (B) Latex (C) Resins (D) Mucilae
9. Two glands are situated above the kidneys:
(A) Adrenal (B) Parathyroid (C) Thyroid (D) Pancreas
10. On receiving the message from coordinators, the effectors perform action is called:
(A) Receptors (B) Coordinators (C) Effectors (D) Response
11. The matrix of cartilage also contains fibers:
(A) Glucagon (B) Insulin (C) Collagen (D) Lacuna
12. Some invertebrates also reproduce through binary fission:
(A) Sexual reproduction (B) Asexual reproduction
(C) Pollination (D) Budding

Roll No.(in Figures): (in Words):

Maximum Marks: 48

SUBJECTIVE TYPE
(PART - I)

Time Allowed :1.45 Hours

Q2. Write short answers to any FIVE (5) questions:

(5×2=10)

- (i) Differentiate between glottis and epiglottis.
- (ii) Define Asthma and also write its symptoms.
- (iii) Define homeostasis.
- (iv) Name the plants from which resins, gums, latex and mucilage are obtained.
- (v) Define halophytes with example.
- (vi) Define meninges. Also mention its function.
- (vii) What is meant by ganglion?
- (viii) Differentiate between aqueous humor and vitreous humor.

Q3. Write short answers to any FIVE (5) questions:

(5×2=10)

- (i) Explain hinge joints briefly.
- (ii) Differentiate between flexor and extensor.
- (iii) Define suckers?
- (iv) What is tissue culture?
- (v) What is gynoecium?
- (vi) Define gene.
- (vii) Define translation.
- (viii) Explain incomplete dominance briefly.

Q4. Write short answers to any FIVE (5) questions:

(5×2=10)

- (i) Differentiate between population and community.
- (ii) What is meant by predation?
- (iii) What are transgenic animals?
- (iv) Write two advantages of use of fermenters.
- (v) What is recombinant DNA?
- (vi) Define drug.
- (vii) What are sedatives? Give an example.
- (viii) Differentiate between antigens and antibodies.

(PART - II)

Note: Attempt any TWO questions.

(2×9=18)

Q5. (a) Write a note on xerophytes and hydrophytes.

5

(b) Write a note on autonomic nervous system.

4

Q6. (a) Describe the components of human skeleton.

5

(b) Explain male reproductive system of rabbit.

4

Q7. (a) Describe the components of ecosystem.

5

(b) Explain the scope and importance of biotechnology in medicine and environment.

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