



H.S.C. Annual Examinations 2021
(MODEL QUESTION PAPER)
ZOOLOGY PAPER-II
(Science Pre-Medical Group)

Total Duration: 01 Hour 30 minutes

Total Marks: 45

SECTION "A" MULTIPLE CHOICE QUESTIONS (M.C.OS)

Time Allowed: 30 Minutes

Max Marks: 22

Note: This Section consists of 20-part questions and all are to be answered.

Q1. Choose the correct answer for each from the given option:

- i. Set of regulatory mechanism which are involved in maintaining an organism internal environment is called
 - (a) Osmoregulation
 - (b) Homeostasis
 - (c) Feedback mechanism
 - (d) Thermoregulation

- ii. Cockroaches and other insects have excretory system which consists of long, thin, blind tubules called
 - (a) Flame cells
 - (b) Malpighian tubules
 - (c) Metanephridia
 - (d) None

- iii. The longest and strongest bone in human body is
 - (a) Femur
 - (b) Tibia
 - (c) Fibula
 - (d) None

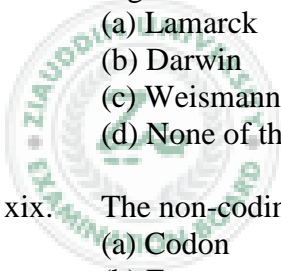
- iv. The check and balance mechanism operating in the body is called
 - (a) Receptors
 - (b) Feedback system
 - (c) Both
 - (d) None

- v. A solution which has high concentration of solvent than solute is called
 - (a) Hypotonic
 - (b) Hypertonic
 - (c) Isotonic
 - (d) None

- vi. Planaria has-----type of Nervous system
 - (a) Diffused Nervous system

- (b) Centralized Nervous system
(c) Both a& b
(d) None of these
- vii. When thyroid is enlarged due to low intake of iodine in diet, this condition is called
(a) Goiter
(b) Cretinism
(c) Myxedema
(d) Thyroxin
- viii. The main body of neuron is called
(a) Dendrite
(b) Axon
(c) Cell body
(d) Nissl body
- ix. In synthesis of DNA strand from RNA, the enzyme involved is
(a) RNA polymerase
(b) DNA polymerase
(c) Ligase
(d) Reverse transcriptase
- x. Fossil fuel, oil, coal and natural gas are included in
(a) Renewable resources
(b) Non-renewable resources
(c) Productivity
(d) Symbiosis
- xi. Animals which lay eggs are called
(a) Oviparous
(b) Viviparous
(c) Larviparous
(d) None
- xii. Process by which female gametes are produced is called
(a) Oogenesis
(b) Spermatogenesis
(c) Gametogenesis
(d) All
- xiii. Which type of reproduction is common in sponges?
(a) Budding
(b) Fission
(c) Parthenocarpy
(d) sporulation
- xiv. The Study of development of an organism from egg to adult is termed as
(a) Embryology
(b) Development biology
(c) Ecology
(d) None

- xv. The morula is changed into
(a) Blastula
(b) Gastrula
(c) Extrula
(d) Moro blastula
- xvi. The nervous system of chick developed from
(a) Ectoderm
(b) Endoderm
(c) Mesoderm
(d) None of these
- xvii. The gas responsible for global warming is
(a) Oxygen
(b) Nitrogen
(c) Carbon dioxide
(d) Ozone
- xviii. According to him theory of organic evolution based on the principle of use and disuse of organs.
(a) Lamarck
(b) Darwin
(c) Weismann
(d) None of these
- xix. The non-coding sequence of gene are
(a) Codon
(b) Exon
(c) Intron
(d) Axon
- xx. The manipulation of genetic material of any organism to provide some usefull products is called
(a) Genetic epistasis
(b) Bioenergetics
(c) Genetic engineering
(d) None of these
- xxi. One of following possess hydrostatic skeleton
(a) Crab
(b) Butterfly
(c) Earthworm
(d) All of these
- xxii. The point of attachment of muscle with bone is called
(a) Tendon
(b) Ligament
(c) Joint
(d) None



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SECTION 'B' (SHORT-ANSWER QUESTIONS) Marks: 14

2. This part consists of reasoning questions. Attempt any Three-part questions. Each question carries one mark. **06 marks**

- i. Why is Hypothalamus called the thermostat of the body? **OR** How does Hydrostatic skeleton help the earthworm in locomotion?
- ii. Why do Skeletal muscles show fatigue after heavy exercise?
- iii. Why is Nervous co-ordination called the quickest way of communication within the body?
- iv. How does fresh water fish regulate Osmoregulation? **OR** Why abnormal muscle contraction occurs by low level of calcium ions(hypocalcemia)?
- v. Why do Cnidarians have diffused nervous system? **OR** Why is DNA fingerprinting performed?
- vi. Why is Parthenogenesis common in ants?

3. Attempt any four-part questions. Each question carries two marks. Answer should not exceed 3 to 4 lines. **08 marks**

- i. Write a note on Lithotripsy **OR** Cardiac muscles
- ii. Write differences between any one
 - a. Bone and Cartilage.
 - b. Axile and appendicular skeleton
- iii. Write four functions of skeleton.
- iv. Describe Locomotion in Amoeba. **OR** Define neurons and write name of its types
- v. Name the various type of Asexual reproduction in animals with examples.
- vi. Define biotechnology also write its importance.
- vii. State the Objections on Lamarck's Theory. **OR** List out Renewable and Non-renewable resources of environment.

SECTION "C" (DETAILED-ANSWER QUESTIONS) Marks: 09

Note: Attempt any two question from this section all question carries equal marks.

4. Describe the structure of Nephron and explain the regulatory functions of kidney. **OR** Define Skeletal muscles and describe the structure of Skeletal muscle fiber.
5. Describe the structure and functions of different parts of the human brain. (Diagram is not required.) **OR** Define Endocrine glands. Describe Pituitary gland as Master gland.
6. Describe with the help of labelled diagram the human female reproductive system. **OR** Define Development. Explain the process of Gastrulation in a Chick up to the formation of three germinal layers. Draw labelled diagram.
7. Describe Darwin theory of Natural selection and the objections raised against it.