

**TEST NO.2**  
**CH NO.11+13.**

**BIOLOGY**

**Time Allowed: 15 Minutes**

**-019 (10<sup>th</sup> Class)**

**Paper : (Objective Type)**  
**Maximum Marks: 12**

**Note:-** You have four choices for each objective type question as A,B,C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero in that question.

| Q.1 | QUESTION                                            | (A)                 | (B)                                           | (C)                            | (D)                             |
|-----|-----------------------------------------------------|---------------------|-----------------------------------------------|--------------------------------|---------------------------------|
| 1.  | Which organ is responsible for filtering the blood? | Intestine           | Brain                                         | Stomach                        | Kidney                          |
| 2.  | There are _____ types of movements.                 | 2                   | 3                                             | 4                              | None of these                   |
| 3.  | Organs which work for homeostasis are.              | Lungs               | Skin                                          | Kidneys                        | All                             |
| 4.  | Which joints allow no movement?                     | Moveable joints     | Slightly moveable joints                      | Immoveable joints              | None of these                   |
| 5.  | U-shaped part of renal tubule is called.            | Renal corpuscle     | Glomerulus                                    | Loop of henle                  | Bowman's capsule                |
| 6.  | Lacuna is present in the cartilage of.              | Bone                | Matrix                                        | Collagen                       | Cartilage                       |
| 7.  | Normal pH of blood is maintained at.                | 7.35-7.40           | 7.35-7.45                                     | 7.30-7.40                      | 7.30-7.45                       |
| 8.  | Inflammation of membrane at joints is called.       | Osteoarthritis      | Rheumatoid arthritis                          | Arthritis                      | Gout                            |
| 9.  | What waste products are excreted by kidneys?        | Urea, water & salts | Salts, water and carbon dioxide               | Urea & Water                   | Urea & salts                    |
| 10. | Bone can store.                                     | Urea                | Salts                                         | Uric Acid                      | Minerals                        |
| 11. | What is the function of the Ureter?                 | To store urine      | To carry urine from the kidney to the bladder | To carry urine out of the body | To remove waste from the blood. |
| 12. | Muscles can only                                    | Contract            | Push                                          | Expand                         | All of above                    |

**A B C D**

**A B C D**

**A B C D**

**A B C D**

**A B C D**

|   |                                                                                                            |   |                                                                                                            |   |                                                                                                            |    |                                                                                                            |    |                                                                                                            |
|---|------------------------------------------------------------------------------------------------------------|---|------------------------------------------------------------------------------------------------------------|---|------------------------------------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------------------------------|
| 1 | <input type="radio"/> A <input type="radio"/> B <input checked="" type="radio"/> C <input type="radio"/> D | 4 | <input type="radio"/> A <input type="radio"/> B <input checked="" type="radio"/> C <input type="radio"/> D | 7 | <input type="radio"/> A <input checked="" type="radio"/> B <input type="radio"/> C <input type="radio"/> D | 10 | <input type="radio"/> A <input type="radio"/> B <input checked="" type="radio"/> C <input type="radio"/> D | 13 | <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input checked="" type="radio"/> D |
| 2 | <input type="radio"/> A <input checked="" type="radio"/> B <input type="radio"/> C <input type="radio"/> D | 5 | <input type="radio"/> A <input type="radio"/> B <input checked="" type="radio"/> C <input type="radio"/> D | 8 | <input type="radio"/> A <input type="radio"/> B <input checked="" type="radio"/> C <input type="radio"/> D | 11 | <input type="radio"/> A <input checked="" type="radio"/> B <input type="radio"/> C <input type="radio"/> D | 14 | <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input checked="" type="radio"/> D |
| 3 | <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input checked="" type="radio"/> D | 6 | <input type="radio"/> A <input checked="" type="radio"/> B <input type="radio"/> C <input type="radio"/> D | 9 | <input checked="" type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D | 12 | <input checked="" type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D | 15 | <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input checked="" type="radio"/> D |

نوٹ: معروضی سوال نامے کو توجہ سے پڑھیں اور ہر MCQ کی درست آپشن A, B, C, D کو پین کی سیاہی یا مارکر سے اس طرح پُر کریں کہ سیاہی دائرے سے باہر نہ نکلے۔ ایک سے زیادہ دائروں کو پُر کرنے یا کٹ کر پُر کرنے کی صورت میں مذکورہ جواب غلط تصور ہوگا۔



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**TEST NO. 2**

**CH- 11+13**

**BIOLOGY**

**Time Allowed: 1:45 hours**

**-019(10<sup>th</sup> class)**

**Paper : (Essay Type)**

**Maximum Marks: 48**

**(PART – I)**

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

**10**

- (i) What is Bowman's capsule?
- (ii) Define osmoregulation.
- (iii) Define Homeostasis.
- (iv) Define excretion.
- (v) What do you mean by locomotion?
- (vi) What do you mean by "Exoskeleton"?
- (vii) Differentiate between transpiration and Guttation.
- (viii) What do you mean by endoskeleton?

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

**10**

- (i) What do you know about bone and cartilage?
- (ii) What is nephron?
- (iii) What is pressure filtration?
- (iv) Define dialysis.
- (v) What is joint?
- (vi) What is urinary system?
- (vii) What is bone?
- (viii) What are collection ducts?

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

**10**

- (i) Define lithotripsy.
- (ii) What is renal corpuscle?
- (iii) Describe upper and lower jaw in mammals and vertebrates?
- (iv) What are the components of human skeleton?
- (v) What is guttation?
- (vi) What is hydrophyte?
- (vii) What glomerular filtration.
- (viii) What are mature bone cells called?

**(PART – II)**

**Note:- Attempt any TWO questions.**

**5. a) Describe Homeostasis in plants. Which different mechanism are adopted for Homeostasis in plants?**

**5**

**b) You have observed bone. Describe its structure with diagram.**

**4**

**6. a) How plants make osmoregulatory adjustments in different environments?**

**5**

**b) Define joint and write down the types of joints.**

**4**

**7. a) Explain the function of Kidney.**

**5**

**b) What do you know about Arthritis. Describe its types.**

**4**



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10<sup>th</sup> class

## PART-I

Q Write short answers to any five questions

Q1 What is Bowman's capsule?

A: Bowman's capsule is the part of nephron cup-shaped structure enclosing the glomerulus.

Q2 Define Osmoregulation?

A: Osmoregulation is defined as the regulation of concentration of water in blood and other body fluids.

(iii) Define Homeostasis?

Ans: Homeostasis may be defined as the maintenance of the internal condition of body at equilibrium despite change in the external environment.

(iv) Define excretion?

Ans: Excretion is also a process

of homeostasis. In this process the metabolic wastes are eliminated from body to maintain the internal condition at equilibrium.

Q/v) what do you mean by locomotion?

Ans The movement of an organism from one place to another often by the action of appendages such as flagella, limbs or wings. In some animals such as fish locomotion result from a wave like series of muscle contractions.

Q/v) what do you mean by Exoskeleton?

Ans Exoskeleton skeleton is the external skeleton that support and protect an animal's body.

Q(vii) Differentiate b/w Transpiration and Guttation?

Ans Transpiration:-

Plants store large amount of water in their cells for turgidity. Extra water is removed from plant body by transpiration.

Guttation:-

The appearance of drops of water on the tips of edges of leaves is called guttation.

Q(viii) What do you mean by endoskeleton?

Ans Endoskeleton is the internal bone or cartilage structure of animals which have a vertebrae and some animals without vertebrae. endoskeleton mean inside of the human body.

3) Write short - - - - -  
- - - - - question.

Q(i) what do you know  
bone and cartilage?

bone:-

Ans Hard connective tissue  
move supports and protect  
the various organs of  
the body.

Cartilage :-

The connective tissue that  
make part of the human  
skeleton.

Q(ii) what is nephron?

Ans Nephron is the functional  
unit of kidneys.

Q(iii) What is pressure filtration?

Ans The first step in urine  
formation the process in  
which most of the  
water, salt, glucose  
and urea of the  
blood is forced out

glomerulus and passed into Bowman's capsule.

**Q. Define dialysis?**

**A.** The cleaning of blood (removing nitrogenous wastes and extra water) by artificial ways.

**Q. What is joint?**

**A.** A joint is the location at which two or more bones make contact. They allow movement and provide mechanical support.

**Q. (vi) What is urinary system?**

**A.** The system responsible for the production and excretion of urine includes kidneys, ureters, urinary bladder, and urethra.

**(vii) Q. What is bone?**

**A.** Hard connective tissue moves, supports, and protects and protects the

various Organs of the body.

Qviii) What are Collection ducts

Ans The Tube into which the renal tubules of nephron open.

4) Write short \_\_\_\_\_  
\_\_\_\_\_

Qix) Define Lithotripsy?

Ans Treatment for removing kidney stones. non electrical shock wave are bombarded on the stones to break them.

Qii) What is renal capsule?

Ans The collective name for the glomerulus and Bowman's capsule of the nephron.

Qliii) Describe upper and lower jaw in mammals and vertebrates?

Ans Vertebrates in most vertebrate the jaw are bony or cartilaginous and oppose.

vertically. Comprising an upper jaw and lower jaw.

Q: what are the components of human skeleton

A Skeleton: components The skeleton is composed of fibrous and mineralized connective tissues that give it firmness and flexibility.

Q: what is guttation?

A Appearance of drops of xylem sap on the tips or edges of leaves.

Q: what is hydrophyte?

Hydrophyte are the plant which live completely or partially submerged in freshwater.

Q: what glomerular filtration?

A The material that passes from glomerulus into the Bowman's capsule.

Q what are mature bone cells called?

A The mature bone cells are called osteocytes.

Note (Attempt any Two-----)

5: Describe Homeostasis in plant -----

Homeostasis in plants

A) a: plants store respond to environmental changes and keep their internal condition constant i.e. homeostasis

They apply different mechanism for the homeostasis of water and other chemical oxygen, carbon dioxide, nitrogens materials i.e.

Removal of extra carbon dioxide and oxygen:-

In day time. The carbon dioxide during cellular respiration is utilized in photosynthesis and hence

It is not a waste product

At night. It is surplus <sup>because</sup> there is no utilization

of carbon dioxide.

**Oxygen.** is produced in mesophyll cells only during daytime as a by product of photosynthesis. After its utilization in cellular respiration the mesophyll cells remove the extra amount of oxygen through stomata.

**Removal of Extra water:-**

We know that plants obtain water from soil and it is also produced in the body during cellular respiration. Plants store large amount of water in their cells for turgidity. Extra water is removed from plant body by transpiration.

**Removal of other metabolic wastes:-**

Plants deposit many metabolic wastes in their bodies as harmless insoluble material.

For example - Calcium oxalate is deposited in the form of crystals in the leaves and stem of many plants e.g. in tomato.

Other waste materials that are removed from plants are resins, gums and latex.

b) You have observed bone

— — — — —

### A Bone:-

Bone is the hardest connective tissue in body not only move support and protect the various parts of body but also produce red and white blood and store minerals.

### Structure of bone

## Compact bone:-

The hard outer layer of a bone is called compact bone.

## Spongy bone:

The interior of bone is soft and porous. It is called spongy bone. Spongy bone contains blood vessels and bone marrow.

## Osteocytes:-

The bone contains different types of cells. The mature bone cells are called osteocytes.

## 6) a) How plant osmoregulatory

Ans on the basis of the available amount of water and salt. Plants are divided into three groups.

### Hydrophytes:-

are the plants which live completely or partially sub-

merged in freshwater. Such plants do not face the problem of water storage. They have developed mechanism for the removal of extra water from their cells. Hydrophytes have broad leaves with large number of stomata on their upper surfaces.

### Xerophytes:-

Live in dry environment. They possess thick waxy cuticle over their epidermis to reduce water loss from internal tissues. They have less number of stomata to reduce the rate of transpiration. Such plants have deep roots to absorb maximum water from soil.

## Halophytes:-

live in sea water and are adapted to salty environment. Salt enters in the bodies of such plants due to their higher concentration in sea water. On the other hand, water tends to move out of their cells into the hypotonic sea water. When salt enters into cells, plants carry out active transport to move and hold large amount of salts in vacuoles.

b) define joints and write down the type of joint?

A joint:-

A joint is the location at which two or more bones make contact. They

allow movement and provide mechanical support.

joint can be classified on the basis of the degree of movement

they allow.

**Types of joints:-**  
**Immoveable joint**

Such joint allow no movement the joint between the skull bones.

**Slightly moveable joint**

Such joints allow slight movements. joints between the vertebrae.

**moveable joint:**

They allow a variety of movement. Shoulder joint

hip joint. elbow joint knee joint. etc. There are many

many types of moveable joint in body. The main types are hing joint and

ball and socket joint. Hinge joint move back and forth like the hinge on a door and allow movement in one plane only. They knee and elbow are hinge joints. Ball and socket joint allow movement in all direction. The hip and shoulder joints ball and socket joints.

**Q) a: Explain the function of kidney?**

**A** The main function of kidney is urine formation which take place in three steps.

The first step is pressure filtration. when blood enters the kidney via the renal artery. It goes to many arterioles and then to the glomerulus. The pressure

is blood very high, and so most of the water, salt, glucose and urea of blood is forced out of glomerular capillaries.

### Selective re-absorption:-

The second step in urine formation is that about 99% of the glomerular filtrate is reabsorbed into the blood capillaries surrounding the renal tubule.

### Tubular Secretion:-

The third step in urine formation is that different ions like creatinine, urea etc. are secreted from the blood into the filtrate in the renal tubule.

### Osmoregulatory function:-

Osmoregulation is defined as the regulation of

Concentration of water salt in blood and other body fluids. Kidneys play important role in osmoregulation by regulating process and excessive loss of water. Concentration the body fluid whereas excess intake the water dilutes them.

7(b) What do you know about Arthritis

Ans:- Arthritis means inflammation in joints. It is also very common in old age and in women. It is characterised by pain and stiffness in joints particularly in the weight bearing joints eg hip joint ankle joint etc.

**Rheumatoid arthritis:**

It involves the inflammation of the membranes at

joint's. It symptoms include  
fatigue low grade fever  
pain and stiffness in  
joint's.

### Osteoarthritis:-

usually occur with age  
and affect the finger  
knees and hip.