

Post Mid Term Answer key (2024-25)

PHYSICAL EDUCATION (048)

Class : XI Sci/Com/Hum

Date : /01/2025

Admission No.:

Duration: 1 Hrs

Max. Marks: 25

Roll No.:

General Instructions:

The question paper consists of 3 sections and 14 Questions.

Section A consists of question 1-7 carrying 1 mark each and is multiple choice questions. All questions are compulsory.

Sections B consist of questions 8-13 carrying 2 marks each and are very short answer types and should not exceed 60-90 words. All questions are compulsory.

Sections C consist of Question 14-15 carrying 3 marks each and are short answer types and should not exceed 100-150 words. All questions are compulsory.

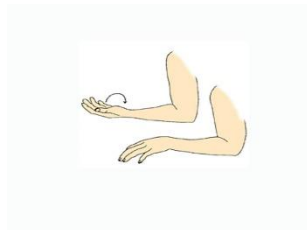
Section-A

1. For preventing sports injuries, the knowledge of which of the following subject is essential? (1)
- a. Anatomy
b. Kinesiology
c. Physiology
d. **All the above**

2. Trachea is also known as. (1)
- a. Pharynx
b. Voice box
c. Nose
d. **Windpipe**

3. The plane which divides the body into a left and a right is called. (1)
- a. Coronal Plane
b. **Sagittal Plane**
c. Vertical Plane
d. Transverse Plane

4.

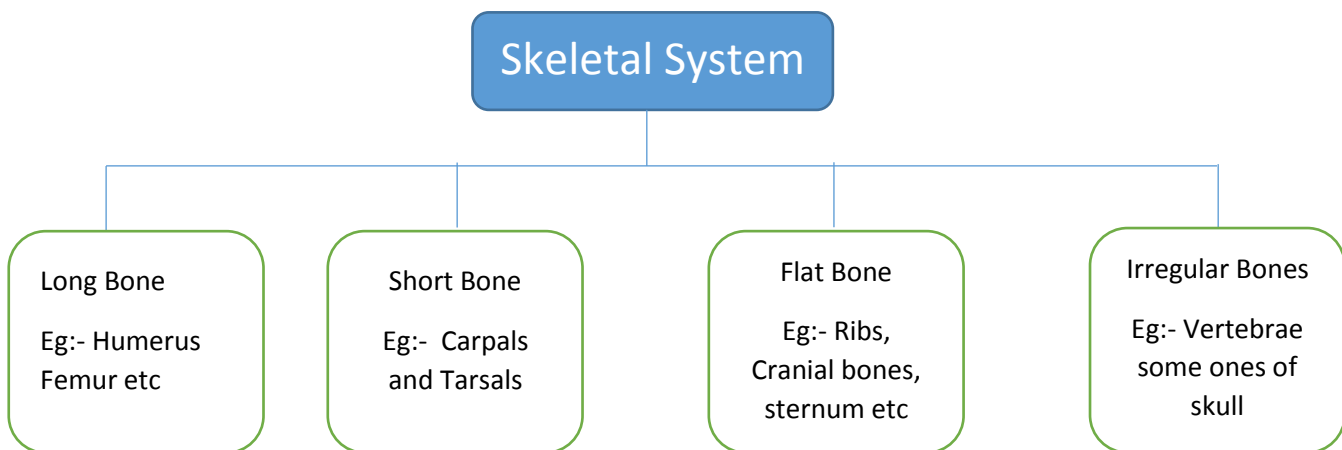


- a. Adduction Abduction
b. Inversion Eversion
c. **Pronation Supination**
d. Flexion Extension (1)
5. How many types of muscle tissue are there? (1)
- a. 1
b. 2
c. **3**
d. 4

6. Using the sweep shot in hockey, wherein more force and time are applied, gives it much more power than a hit and is an example of which Principle of Biomechanics. (1)
- Force-Motion
 - Force-Time**
 - Range of Motion
 - Segmental Interaction
7. Out of the following, which is not the property of muscle. (1)
- Contactility**
 - Excitability
 - Elasticity
 - Contractility

Section-B

8. Name the four main classification of bones with help of flowchart. (2)



9. Differentiate between flexion and extension. (2)
- Flexion- it is the bending of flexing a limb. Closing/ decreasing the angle at the moving joint. Whereas Extension- it is straightening or extending a limb. Opening/ increasing the angle at the joint. It is the opposite movement of flexion.**
- Example of flexion getting the forearm close to the bicep whereas eg:- of extension is keeping the arm straight**
10. Where are smooth muscles found? (2)
- They are found mostly in hollow organs such as stomach, urinary bladder, and respiratory passages. Smooth muscles are also present in the eyes, where their function is to change the size of the iris and alter the shape of the lens**
11. Define Biomechanics. (2)
- According to James. G. Hay “Biomechanics is the science concerned with the internal and external forces acting on a human body and the effects produced by these forces”.**
12. What is plane of movement? (2)
- A single plane divides the entire body into two parts. There are three planes of motion in which our body moves. Most of our moments are not straight up or down or side to side or in a single direction etc., especially in sports.**
13. Define circulatory system. (2)
- The circulatory system is responsible for the transportation of the gases i.e. Oxygenated blood from heart to the body cells and deoxygenated blood back to the heart, and then deoxygenated blood from heart to lungs and oxygenated blood back to the heart with the help of arteries and veins.**

Section-C

14. Describe the circulatory system.

(3)

The circulatory system is responsible for the transportation of the gases i.e. Oxygenated blood from heart to the body cells and deoxygenated blood back to the heart, and then deoxygenated blood from heart to lungs and oxygenated blood back to the heart with the help of arteries and veins.

1. Pulmonary circulation: In the pulmonary circulation the heart pumps deoxygenated blood from its first pumping chamber i.e., Right ventricle through pulmonary artery towards the lungs. The blood flows by touching the diaphragm of the lungs where exchange of gases takes place. After the exchange, the oxygenated blood comes back to the heart in its first receiving chamber i.e., left atrium through pulmonary veins. In the entire body there is only one artery which carry deoxygenated blood – the pulmonary artery and there is only one vein that carries oxygenated blood – the pulmonary vein, and they both are the part of pulmonary circulation.

2. Systematic circulation: Once the left atrium receives the oxygenated blood, it sends it to the heart's second pumping chamber i.e., the left ventricle and from their it is pumped to the entire body through aorta which is the body's biggest artery, it looks like a tree supplying water to every branch. At each body part there is a network of thin blood vessels known as capillaries which connect arteries and veins. Capillaries have a very thin layer which helps in exchange of gases and other nutrients. The waste product and deoxygenated blood goes to smaller veins, and then to bigger veins and finally reaches back to the heart. From the heart, blood is pumped into the lungs where it is re-oxygenated and returned to the heart. where it is received by the heart in its second receiving chamber i.e., left atrium. And then the cycle is completed. Both the circulations happen simultaneously and the heart controls the whole movement depending upon the requirements of the body. For example, you may have experienced when you run fast your heart beats very fast.

That is because your heart is trying to meet the oxygen requirement of your body.

OR



On the basis of given picture answer the following questions:-

- Name any four long bones?
a. 1. Femur 2. Humerus 3. Radius 4. Ulna
- How many bones are there in the vertebral column?
b. 33
- Scapula is an example of _____.
c. Flat bone
- How many carpals are there?
d. 8 carpals
- Shoulder joint is an example of _____ joint.
e. Ball and socket joint
- How many bones are there in an Adult?
f. 206

15. List down all the principles of biomechanics and explain any 2 in detail.

(3)

1. Principle of Force–Motion
2. Principles of Force–Time
3. Principle of Inertia
4. Principle Range of Motion
5. Principle of Balance
6. Principle of The Coordination Continuum
7. Principle of Segmental Interaction
8. Principle of Optimal Projection
9. Principle of Spin

Principle of Force–Motion: The Force-Motion Principle states that it takes unbalanced forces (and the subsequent torques they induce) to create or modify our motion. Unbalanced forces act on our body, or an object, creating or modifying movement. A free-body diagram is a simplified model of any system or object drawn with significant forces acting on the object. Forces must act first before changes in motion can occur. Force–Motion Principle suggests that muscle groups that primarily contribute to interest motion should be trained. Example:

Standing still- forces acting on a person are equal and because of this there is no movement.

2. Principle of Force–Time: The Force-Time Principle states that modification of movement depends on the timing of force application as much as the size of the forces used to create it. It is not only the amount of force that can increase the motion of an object, as also the amount of time over which power can be applied to affect the resulting motion. Increasing the time to use force is also essential in slowing down objects (catching) and landing safely. (Impulse = Force x Time. The greater the time of which force is applied the greater the resulting motion.)

Example: Using the sweep shot in hockey wherein more force and time are applied giving it much more power than a hit.

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