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Lakhisarai

Sub. Physical edu. , Class 11th

BASED ON NCERT

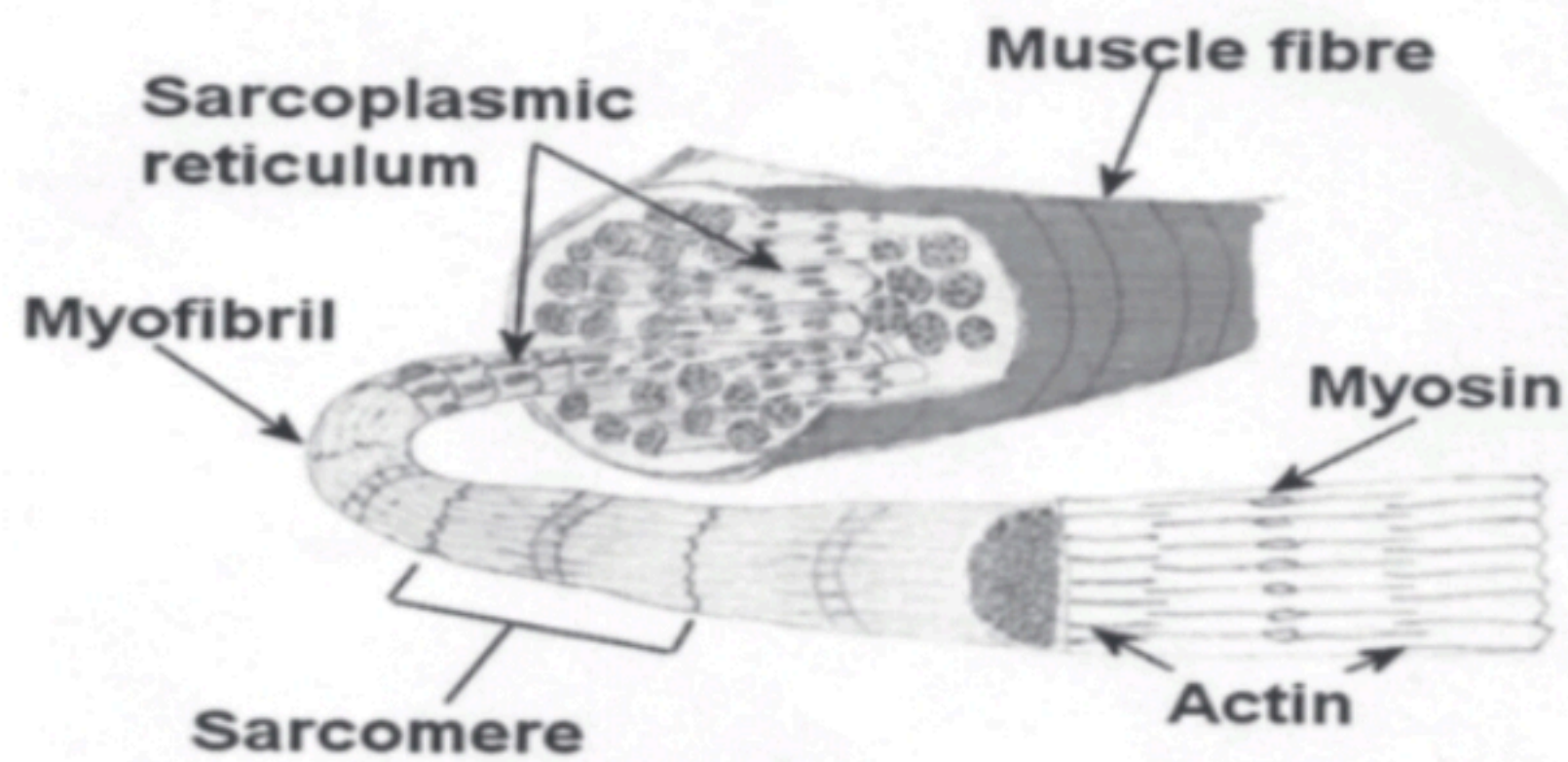
CHAPTER 8

FUNDAMENTALS OF ANATOMY AND PHYSIOLOGY

SHORT ANSWER TYPE (60 WORDS - 3 MARKS)

1. Explain structure of the muscle with the help of a diagram.

Ans. There are about 600 voluntary muscles in the body. Each muscle is made up of thousands of long and narrow muscle cells called muscle fibers. These muscle fibers are arranged in bundles and enclosed within a tough layer of connective tissue called epimysium (sarcolemma). Every muscle fiber is made up of very large number of microscopic threads called myofibrils. Myofibrils consists of protein molecules called actin and myosin



2. Explain external and internal respiration.

Ans. Inhalation and exhalation are the two processes of external respiration. This breathing process oxygenate to the blood. It gets purified as carbon

dioxide is removed from the blood. External respiration takes place in the lungs. Internal respiration is the process of respiration that takes place in the tissues and cells. Blood full of oxygen reaches the tissue where oxygen is used up during energy production process and carbon dioxide is then taken by the blood to the lungs.

3. Define the phenomenon of second wind. What are its causes and symptoms?

Ans. The breathlessness caused due to prolonged exercise is removed automatically by our body within short span of time of such exercise. This sense of relief is called 'second wind'.

Causes of second wind: When we perform strenuous exercise, our body takes some time to adjust according to the increased demand of energy. So, the second wind occurs before the adjustment.

Symptoms of second wind:

- i. Faster breathing
- ii. Signs of tension and worry on the face
- iii. Headache
- iv. Suffocation in the chest appears
- v. Pain in muscles
- vi. Condition of giddiness appears. These painful feelings disappear with the onset of second wind.

4. What are the functions of respiratory system?

Ans. The main functions of respiratory system are given as under:

- i. To exchange oxygen and carbon dioxide between the air and blood.
- ii. To produce sound. It helps vocal chords to produce sound.
- iii. To regulate blood Ph.
- iv. To protect against some micro organism. Respiratory system blocks the entry of microorganism in the body at various levels, thus it provides protection against harmful microorganisms like virus, bacteria, etc.

5. Explain the functions of heart.

Ans. The main functions of heart are given below.

- i. It circulates the pure blood to all parts of the body. This is called systemic circulation.
- ii. It carries the impure blood from all parts of the body to the lungs for purification. This is called pulmonary circulation.
- iii. It regulates the blood pressure.
- iv. It regulates the heart rate.
- v. Regular exercise improves the efficiency of the heart.