

TIME ALLOWED.

5th December, 1981.

2½ Hours.

Answer FOUR Questions. Question 1 and ONE from each section.

Compulsory Question.

1. Consider the exercise:-

Standing. Hands on Hips - Heels raising, full knees bending, knees straightening, heels lowering.

State (a) The principle joints at which movement occurs. (2)

(b) The principle muscle groups involved in each phase of the exercise. (List muscles). (10)

(c) How are the muscles working? (8)

Section I. Answer ONE Question.

2. Describe the arrangement of the muscles of the Anterior Abdominal Wall. (6)
State the principle attachments of each muscle. (6)
Indicate the actions of the muscles. (8)

3. Describe the structure of a Synovial Joint of your own choosing under the following headings:-

(a) Classification. (1)

(b) Articular surfaces. (4)

(c) Ligaments. (11)

(d) Movements possible. (4)

Section II. Answer ONE Question.

4. What factors are responsible for the maintenance of normal Blood Pressure? (20)

5. Give an account of the essential components in a simple Reflex Arc. (20)
Produce a well-labelled diagram.

6. Describe the interchange of oxygen and carbon dioxide taking place between:-

(a) The Blood and atmospheric air (8)

(b) The Blood and Body Tissues. (8)

Explain how oxygen and carbon dioxide are transported in the Blood. (4)

Section III. Answer ONE Question.

7. What is a Lever? (2)

Give ONE example of each of the orders of levers found in the Human Body stating clearly in each case which structures constitute Weight Arm, Effort Arm, Weight, Power and Fulcrum. (18)

8. Explain the terms Potential and Kinetic Energy. (6)

How do they apply in the exercise:-

Walk Standing - One arm swinging forwards and backwards? (7)

At what stages is muscle work required to maintain the movement and at what stage is no muscle work required? (7)