

## HELEN KELLER

Everything is done by the hand of the Lord and of Moses. Helen Keller was put on this earth for a purpose, just the same as every other person. Any person with a perseverance of faith can accomplish any task no matter how difficult.

With her perseverance of faith she has learned to see with her hands, has educated herself with her hands, and has become so learned that she has written a number of books dealing with her conceptions of the world today and her place therein. ( Out of the Dark, The World I Live In )

Her power of imagination has been developed to such a degree of perfection that she is able to perceive most things in the world just as they are in the truest of realities.

Nature compensated and kept her from an anchoritive life through the practice of strengthening her remaining senses. She was able to hear with greater distinctness than other people. Her sense of smell had a new faculty to penetrate the tangle and vagueness of innumerable things. According to an immutable law, the senses assist and re-enforce each other.

Despite all of her convictions there are critics who have told Miss Keller what she could not do. They assumed that her blindness and deafness severed her completely from the things which the seeing and hearing enjoy, and thus they asserted that she had no moral right to talk about beauty, sky, and all such lovely things of the world.



They even declared that the very sensations she had from the sense of touch were vicarious. Some have even denied her existence. (Woe be to those who pass judgement on others, for the final day will bring a reckoning: nothing like the world has ever seen before.) I agree with ~~this~~ Descartes's method: "I think therefore I am." Thus I am metaphysically established, and I throw upon the doubters the burden of proving my non-existence. When we consider how little has been found out about the mind, is it not amazing that anyone should presume what one can know or cannot know? Yes there are numerous marvels in this visible world unguessed by her, however, there are a myriad sensations perceived by her by which the critics and thousands of other peoples do not dream.

Helen Keller, in my mind is one of the finest women of faith ~~of~~<sup>in</sup> the world, I would like to pay tribute to her undying perseverance in the Lord, because he has given every person the privilege to construct her better world, for she is a child of God, an inheritor of a fragment of the mind that created all worlds.



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 created all worlds.

Helen Keller (Research)

Kinesiology  
Gene Roberts

11:30

11/17/45



- I. a. What do we mean by equilibrium? Give your most complete definition.
- b. Since it is impossible to understand the physical principles of total body action without understanding certain governing laws of motion, please give in detail the Newtonian laws; the laws of inertia; the laws of acceleration; the law of reaction.
- c. The levers of the body frequently move in complete unison and with perfect timing in respect to their involved neighbors. For instance, when one climbs the stairs, one's weight is lifted by extension at three articulations simultaneously. Name the articulations and state generally what takes place in such activity at these articulations.

- II. a. List four of the fundamental manipulative skills.
- b. Explain briefly the three principal types to which all manipulative skills belong.

- III. In the field of selected sports state briefly the types of fundamental manipulative skills to which each of these sports belong, and give at least three general musts, either muscular or mechanical, for the successful performer of each sport. (If you prefer, substitute other sports with which you may be more familiar.)

Archery  
Badminton  
Tug o' War



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already in the  
library



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C. B. F. - July 1943

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KINESIOLOGY - ANSWERS

pp. 5,7,8, Chap. I

I.

I. (a) Kinesiology is the science which investigates and analyzes human motion. The sciences of physics, physiology and anatomy contribute basically to kinesiology. Kinesiology is a composite of these sciences.

(b) 1. Kinesiology attempts to integrate all the contributing fields of information through direct application to the problems of the teacher of swimming, of dance, of correctives, of sports, and of all other physical education activities.

2. Kinesiology makes an analysis and evaluation of activities.

3. Kinesiology, by analyzing and evaluating activities, makes for better and easier teaching. This analytical ability makes creative, individualized and effective teaching of motor skills possible.

4. A knowledge of kinesiology has its social and physiological benefits, in that through an understanding of the problems of efficiency and economy of movement a new sensitivity to and confidence in poise and grace result. Too, a better understanding of problems of physiological cost, energy budgeting and muscular timing result.

5. Kinesiology should give a better appreciation of posture, for the basic principles which determine the standards for sitting, standing, walking, and body carriage in general are found in this study.

6. The analysis of movement and understanding of standards should make the teacher more aware of irregular and unusual performance, and of abnormal structure.

(At least 3 of above 6)

p. 12, Chap. II

(a) The location of II. motion is in the articulations of the body.

p. 35, Chap. III

(b) The source of all bodily movement is in the muscles of the body.

III.

P. 13, Chap. II

- (a) diarthrodial, or freely movable
- ~~(b)~~ Amphiarthrodial, slightly movable.
- Synarthrodial, immovable

pp. 13-15, Chap. II

- (b) (1) arthrodial, gliding joints. Ex: articular processes of the vertebrae
- (2) condyloid, joint formed by a convex prominence gliding over an adjacent surface. Ex: articulations between the carpals and the first segment of the fingers.
- (3) enarthrodial, ball and socket joint. Ex: shoulder joint.
- (4) ginglymus, hinge joint. Ex: elbow joint.
- (5) reciprocal reception, saddle joint. Ex: found only in the thumb joint.
- (6) trochoid, pivot joint. Ex: This type of joint is found in the head of the radius - where rotation is permitted.

IV.

- |          |          |
|----------|----------|
| (1) Yes  | (11) Yes |
| (2) No   | (12) No  |
| (3) Yes  | (13) Yes |
| (4) Yes  | (14) No  |
| (5) No   | (15) No  |
| (6) No   | (16) Yes |
| (7) Yes  | (17) Yes |
| (8) Yes  | (18) Yes |
| (9) No   | (19) No  |
| (10) Yes | (20) No  |



V.

p. 115, Chap. VII

(a) Equilibrium, in all activities, is an active muscular process to control the center of gravity of the body and of its parts with respect to the base of support.

(b) Newtonian Laws:

1. The laws of inertia:

1. A resting body remains at rest if no external force operates upon it.
2. A body moving with uniform motion retains this uniform motion so long as no external force operates upon it.

2. The laws of acceleration:

1. Acceleration is directly proportional to the force producing it.
2. Acceleration is inversely proportional to the mass of the body.
3. Acceleration is in the same direction as the force producing it.

3. The law of reaction: Every force which meets resistance has an equal and opposite counterforce.

p. 134, Chap. VIII

(c) Hip, knee and ankle. One's weight is lifted by extension at all three articulations. Extension cannot naturally take place at any one of these articulations without also occurring at the other two.

N.B. For class uses an exact description of this process would be advisable. See p. 134.

VI.

pp. ~~188-198~~

188-198, Chap. XIII.

(a) Pushing, pulling, throwing, striking, (or others, such as kicking, etc.)

(b) 1. Those in which performer keeps contact with the object. Ex: pushing, pulling.  
2. Those in which momentum is developed in an object and then released. Ex: All types of throwing.

3. Those skills in which momentum of a body part, or of a tool, is imparted to either a stationary or moving object and it is either moved or accelerated in movement thereby. Ex: serving a tennis ball, or a place kick in football, or striking a baseball, etc.

VII.

p. 203, Chap. XIV.

(a) In archery the momentum is developed in object and then released, as in throwing. Archery calls for precision of movement. Its successful achievement depends largely upon the kinesthetic perception of position and ability always to reproduce this desired position. While it belongs to the same class of skills as throwing, it involves the projection of the arrow by a mechanical device rather than by muscular force. This game demands static rather than dynamic precision.

pp. 207-209, Chap. XIV.

(b) In badminton, we have a type of the fundamental skill of striking, i.e., the type wherein the momentum of a tool or body part is imparted to either a stationary or a moving object by an external force, and the object is moved thereby.

Badminton involves many striking techniques. While the game is similar in some respects to tennis, it differs definitely. The equipment is largely responsible for this. The lighter racquet is largely responsible for this and thus lacks the potential force of the tennis racquet. The compensation for this lack of force must be made in the greater speed of the stroke and in a different timing. From the standpoint of mechanics these drives are classified as either underhand or overhand.



pp. 189-190, Chap. XIII

(c) In Tug o' War the performer keeps contact with the object, as in the fundamental skills of pushing or pulling.

In this sport, if the resistance is light ~~ix~~ arm action alone will suffice. When the resistance is greater, the force can be increased by leaning away from it. Leg extension and the back extensors may be brought into play. In moving backward, the back extensors fix or set the trunk.

#### VIII.

In these couple balancing stunts the top couples in each case are maintaining the more correct positions because they conform more closely to the principles which govern balancing. First, the area of support is broader in the top figures. There must always be a center of support and the top performer should be placed so as to keep the weight line near this center. All balancing must be performed with respect to the center of gravity of the persons doing the balancing. As long as the center of gravity falls inside or behind the arc of the base of support upon which the balancing is being done the balancing will be stable. But the center of gravity of the one being balanced must not pass beyond that edge. In all balance events, the performers must have a thorough understanding of the rules of stability, dealing principally with the size of the base and the location of the center of the gravity with respect to the base. There is, however, the factor of rotary momentum to be considered. Rotary momentum is usually necessary to assume balancing positions. Therefore, in the drawings the weight is more easily supported by the top figures because weight is easier to hold if the legs of the base are in a vertical position, unless the base figure is standing, then the legs may be widened to spread the area of support.

#### IX-A.

p. 332, Chap. XIX.

(1) It is a support for the weight of the trunk.

(2) It is the solid point of attachment for most of the muscles anchoring and controlling the pectoral girdle, as well as the latissimus dorsi which moves shoulder joint.

(3) It encloses and protects the spinal cord and the nerves which lead to and from it. This requires a firm, carefully articulated, and not too flexible column.

(4) It absorbs jolts and jars which come to the body even from such commonplace activities as walking, running and jumping.

#### IX-B.

P. 339, Chap. XIX.

(1) Wand lowering between shoulders. This exercise is good for round shoulders, kyphosis, and forward head.

p. 340

(2) Hanging from the horizontal bars. Passive hanging from the bar is economical of muscular effort but is not good for round shoulders; but in active hanging, the muscles contract to hold the weight and thus transform an activity which is poor for round shoulders into one which is beneficial.

p. 343.

(3) Standing with feet together, lift inner border of each foot but keep heels and toes on the floor, weight on outer borders of the feet. The main value of this exercise is in strengthening these muscles which support the arch along its medial border.

p. 339, Chap. XIX.

(4) Prone lying, arms extended sideward, palms down - raising of head, shoulders, and arms from floor. This exercise when done properly is localized hypertension of the thoracic region, with a little hyperextension of the cervical region. Care must be taken to localize the action in the thoracic regions, with no extreme tension in the lumbar region.

p. 338, Chap. XIX.

(5) "breaking chains". Elbows flexed, arms horizontal, backward movement of arms



in transverse plane. This exercise is also excellent for round shoulders. It is also facilitated by an extension of the thoracic spine; and, by directly encouraging an erect position is good for kyphosis.

X.

pp. 323-327, Chap. XVIII

1. Stair climbing
2. Reaching
3. Wringing or twisting movements
4. Hammering and chopping
5. Shoveling and sweeping.



# KINESIOLOGY

## Examination Questions

- I. (a) Define kinesiology and give its general relationships to certain other sciences.  
(b) List at least three of its contributions to the betterment of teaching physical education.
- II. (a) Where, in the human body, is the location of motion?  
(b) Where, the source of bodily motion?
- III. (a) Name the three general classes of joints to which all articulations of the body belong.  
(b) Name and give one example each of the six types of freely movable joints.
- IV. Answer these questions yes or no:
- (1) A muscle can only pull; it never pushes.
  - (2) Whenever there is nervous stimulation the muscles relax.
  - (3) Every muscle has its two ends attached to different bones.
  - (4) All muscles are arranged in antagonistic pairs or groups.
  - (5) The smaller muscles are located where the greatest force is needed.
  - (6) The human machine has a high degree of efficiency.
  - (7) The primary factors in the physiological condition are fatigue, source of food substance, and removal of waste substances from the tissue.
  - (8) The muscles of the body are of three types, smooth, cardiac, and skeletal.
  - (9) The cardiac is the type directly responsible for motor activity.
  - (10) Muscle activity takes place through the regular processes of metabolism.
  - (11) Inertia is a property of all objects.
  - (12) The human body is stable when in a standing position.
  - (13) Gravity is a constant force acting on all bodies.
  - (14) The two articulating bones of the hip joint are the scapula and the humerus.
  - (15) The elbow joint is a ball and socket joint.
  - (16) The gliding type of joint is best exemplified by the articular processes of the vertebrae.
  - (17) The ball and socket joint is perfectly described by its name.



- (18) The saddle type of joint is a special arrangement found only in the thumb.
- (19) Adduction is a lateral movement away from the central plane of the body.
- (20) Abduction is a movement inward toward the central plane of the body.

- V. (a) What do we mean by equilibrium? Give your most complete definition.
- (b) Since it is impossible to understand the physical principles of total body action without understanding certain governing laws of motion, please give in detail the Newtonian laws: (1) the laws of inertia; (2) the laws of acceleration; (3) the law of reaction.
- (c) The levers of the body frequently move in complete unison and with perfect timing in respect to their involved neighbors. For instance, when one climbs the stairs, one's weight is lifted by extension at three articulations simultaneously. Name the articulations and state generally what takes place in such activity at these articulations.

- VI. (a) List four of the fundamental manipulative skills.
- (b) Explain briefly the three principal types to which all manipulative skills belong.

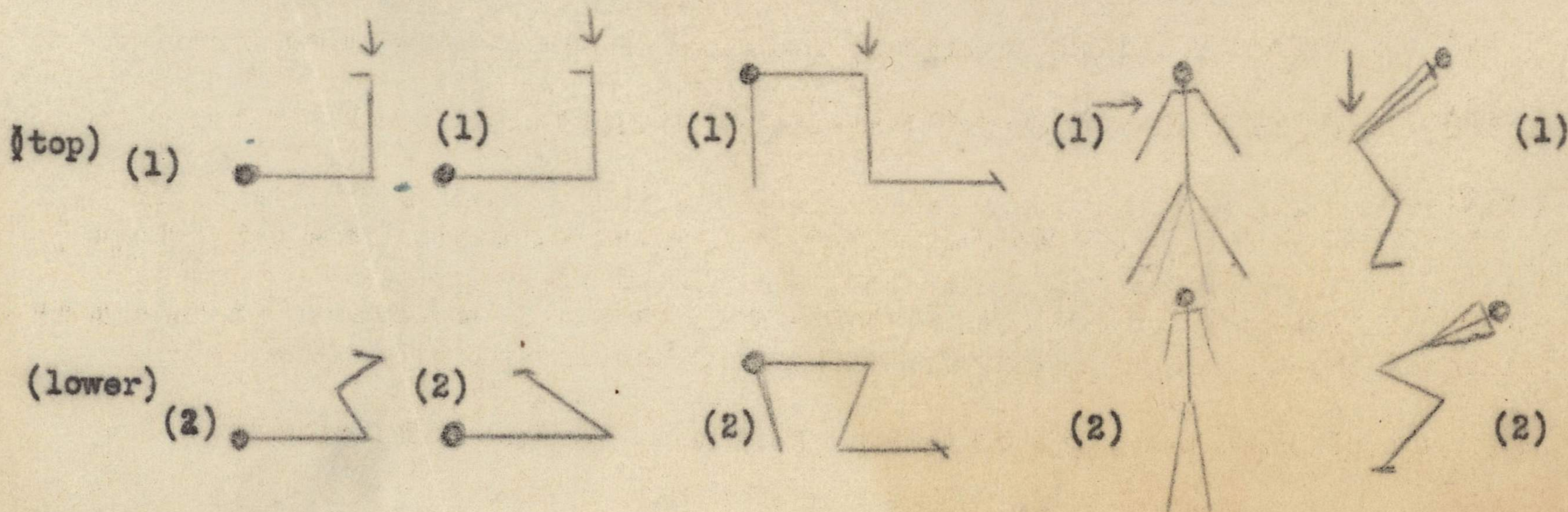
- VII. In the field of selected sports state briefly the types of fundamental manipulative skills to which each of these sports belong, and give at least three general musts, either muscular or mechanical, for the successful performer of each sport. (If you prefer, substitute other sports with which you may be more familiar.)

(a) Archery

(b) Badminton

(c) Tug o' War

- VIII. Each figure below represents the base for some couple balancing stunt. The arrow represents the weight line of the top performer. Why is the weight supported more easily by the top figure in each couple?





IX. (a) Since the spine is the keystone for the development of an upright posture, name four of its specific functions in this service to the human body.

(b) There are some 14 or 15 commonly recommended exercises for posture training. Name at least five such exercises and discuss briefly why each is effective.

X. List at least 5 home or occupational activities.



2h.

- 1/ Where, in the human body, is the location of motion?
2. What are the three general classes of joints to which all articulations of the body belong?
3. Define: Abduction, Adduction, Circumduction.
4. Compare the flexibility and stability of the articulations of the upper and lower extremities.
5. Why is it more difficult to sit erect on the floor with knees extended than to sit erect on a chair or bench?
6. Can the fingers flex as tightly when the wrist is flexed as when it is straight? Explain why.
7. What do we mean by "state of tonus"?
8. In joints such as the knee, hip, or elbow, where movement is distinctly limited in one or more directions, describe the anatomical cause of that limitation of movement.



*Lu.*

1. What animal so thoroughly exemplifies the habit of pretending to be lifeless in order to avoid attracting attention that its name is practically a slang word?
2. What other animals or birds do you know which practice this art of deception?
3. What animal do you know which slips up on its prey by very slow, stealthy movements?
4. What characteristic have you found to be depicted in many illustrations of early Persian, Egyptian, Greek, or Oriental drawings or sculpture, or of American Indian drawings and paintings?
5. Select any motor act which you perform rather frequently. Study your actions from the standpoint of waste motions and apparent causes of fatigue if it is long continued. If you perform it efficiently, how do you think you achieved this? If you perform it inefficiently, how could you go about improving it?
6. Find some chair which is uncomfortable for you. Why is it uncomfortable?
7. Have you ever worn clothing which was uncomfortable? If so, try to analyze the reason for this discomfort in terms of effect upon your movements.
8. Select some sport skill which you have learned recently. Write out the reasons which you know for the details of the technique which you were taught.
9. In driving a car with the driver's seat adjusted too close or too far from the wheel for a person of your size, where do you notice the feeling of fatigue?
10. Define kinesiology and give its general relationships to certain other sciences.



83.5 Kinesiology Exam.

I. a) Kinesi = Greek means movement or motion. Kinesiology is the science which investigates and analyzes human motion.  
+ Relationship to physiology - functions of the body.  
Anatomy & structure " " "  
10 Physics gives in this the mechanical action, (shows the levers, centre of gravity, base of support, Newtonian law of inertia, reaction and acceleration).  
Physical education - exercises sports etc.

b) 1. A better understanding of the exercises.  
2. Gives a better posture. Corrects the deviations in some movements.  
3. Makes it easier to teach the exercises.

II. a) The location of motion is in the 5 articulations.  
b) The source of bodily motion comes from the spine and nerves, muscles.



- III. a) 1. diarthrodial or freely movable  
5 2. amphiarthrodial or slightly "  
3. synarthrodial or immovable.

- b) 1. ball and socket in the hip  
2. gliding - wrist  
5 3. scolloid - fingers (phalange)  
4. saddle joint or (reciprocal) in the thumb only.  
5. hinge - elbow.  
6. pivot joint - head <sup>with axis,</sup> with Atlas).

IV To filled out on the examination questions paper.

V a) Equilibrium = active muscular process to control the centre of gravity of the body and its parts in connection with the base of support.  
3 1/3

b) The Newtonian laws;  
1. Inertia; when a body is at rest, it will remain at rest if no external object acts upon it.  
3 1/3 A body moving uniformly will continue to move in a uniform motion if no external object acts on it.  
2. Acceleration, <sup>explains</sup> depends on



the values of <sup>the</sup> changing force,  
3. It <sup>explains</sup> depends on how the movement is done. For instance <sup>in</sup> walking, the when the foot touches the ground it pushes because there is a counterforce acting from the ground which offers a resistance.

c. When climbing the stairs the 3 articulations are:  
1. the ankle, 2. knee, 3. hip.  
The muscles <sup>extensors</sup> on the posterior side of the hip and upper leg contracts, then the leg ~~is~~ one leg swings forward the quadriceps works, the knee and the ankle flex, weight of body is shifted forward <sup>but this</sup> helps, ~~to~~ also the hands on knee to push off or on hand on railing. All this facilitates the action of the movement. The body is bent very much forward forming an angle at the hip especially for a tired or an older person. When the weight goes to



the front leg, the rear leg is in extension and as soon as the forward foot touches the next step then the rear leg is lifted, first heel then the ball of the foot and the toe pushes off. The ~~flexion~~ <sup>extension</sup> in the rear foot will become a flexion when it is put down on the next step.

- VI. a) 1. pushing or pulling; object  
2. kicking <sup>leg</sup> or <sup>hand</sup> arm.  
3. throwing, something  
4. striking, the object  
5. reaching, for an "

b) 1. In which the body remains in contact with the object like in pushing or pulling, for a small object hand palm touches, flexion posterior, flexion of elbow, if object is bigger, body is flexed forward, knees are bent.   
flexion of fingers to the object, there is more strength when object is close to the body.   
elbow can be flexed, when facing it the back or dorsal muscles work if not facing it, the Abdominal muscles work.



2. When there is a momentum that the muscles remain in the holding position of the object (for a little while) then releasing it and letting the object go like in Archery.

3. This is when striking the subject like in some of the ball games.

VII, a) Archery - throwing

3 general musts;

✓ 1. legs apart to make a big base of support to make the position more stable.

2. Body side ways - head facing the target. this is kept there by the action of the Sternocleidomastoid and the trapeze, trapezius

✓ 3. left arm straightened horizontally, hand flexion of fingers on the bow. right arm is bent by the elbow pulled back in a horizontal position this is kept by the action of the pectoride mainly.

Right Hand must be under the chin.



Then a relaxation of the contracting muscles will release the object of the right hand.

b) Soft ball (the serving)  
1. The person stands with the body side ways to the net. Outside line, facing <sup>to</sup> the net.

2. Left arm goes up horizontally hand holding the ball.

The right arm swings back - working of the deltoid, trapezic, <sup>Romboid</sup> extensors of the hand.

body weight a little to the right, knee there a little flexed - this gives more strength to the swing also the right arm should swing far backward

3. In swinging forward working of biceps and part of pectoral, <sup>Pectoride</sup> the angle should be straight to the hitting object. At the same time the object is thrown a little ways in the air. A little below the center it should be hit. At the same time the



body swings forward  
and the right leg  
steps forward, this  
give a greater speed  
to the action.  
This is used for striking

c) Swimming -  
manipulative skill of  
kicking. 1. This <sup>must be</sup> done  
with the legs. The  
2. In working of muscles  
of the hip and legs is  
done alternately  
by the posterior  
and anterior group

2. The respiration must  
be well take care  
off - head side ways  
for this action when  
counting to after three  
then again in the water  
towards the front.

Turning takes place  
by the neck muscles,  
Sterno - Cleido - Mastoideus  
rotation of the head.

3. Arms alternately <sup>swing</sup>  
the water, do must  
be kept out of the  
water when doing it,  
then goes down and  
backward to push  
the water back.



VIII balancing stunt.  
The weight is supported better by the top figure in each couple, because the angles are greater, the centre of gravity acts upon a greater base of support, this gives more stability when laying with back on the ground. The knees must not be flexed or bent to prevent rotation movement. Knees must always be kept straight. With hands and knees on the ground they must be as far away from each other as the distance from the shoulders to the hip. This gives a bigger base of support weight on hip, because if this will prevent the hyper extension of the lumbosacral spine when standing a position is more stable when the feet are apart from each other - bigger base of support. Also there is more stability when knees and hip are bent

The center of gravity should always fall inside stability  
the base of support



a little, (weight on hip forms straight line ~~to~~ over ankle) instead of bending both hip and knees too much, in this case the weight on hip goes past the ankle - then there is less base of support. The greater the base - the more stability.

IX a) Specific function of the spine.


- ✓ 1. Support of the body, head and ~~high~~ upper parts.
  - ✓ 2. Attachment of the muscles.
  - 41/2 ✓ 3. protects the spinal cord and nerves.
  4. absorption of jolts and jars.
- It must be strong and flexible.

b) For a l. Thoraco-collis - deformation of the head, when one Sternocleidomastoidien is shorter, we give an exercise to lengthen that muscle and shorten the antagonist; flexion of the head to the opposite side of the



deviation, starting from the middle.

2. For a Cyphose (round back) ~~Kyphose~~ we can shake the back; Grand Rond, trapèze, rhomboïde, Angulaire and Deltoïde, work by swinging the elbows backwards.

3.  For a Scoliose (left, right or in S form) we can hang the patient by the head for a few seconds when in a sitting or standing position; this straightens the spine-vertebrae.

4. For X legs we can let the patient walk on the outside of feet, spreads knees from each other.

5. This can also be done for flat feet with tadding the flexion of and contraction of toes, this shorten the muscle on the under sides of feet, which are flat. Then the feet can lose their flatness.

X. The home or occupational activities are;  
1. reaching - down-bent body



or flex knees.

#. on reaching up - on toes -  
body and elevated -  
arms stretched.

2. hacking - meat or  
spinach ~~etc~~, tree etc;  
for a little object, just flexion  
of wrist, elbow,  
if bigger, the arm, and  
body flexion are used.

3. Climbing strairs, ~~we~~

I discussed this before  
3 articulations flex -  
hip, knee, ankle.

#15. relaxing, lay on  
back, foot hangs down  
toes sideways - toes down  
shoulders on ground,  
jaw hangs down, mouth  
not tightly closed,  
if arms or legs are  
moved, they must  
fall down limply,  
May not be rigid.

Shoveling and sweeping  
Wringing or twisting movements



C. Croce

Kinesiology.



Catherina Croce

F For - Dr. Allen.

## Kinesiology;

Definition, History, Relation  
to other sciences.

Contributions

~~we~~ in connection with  
Physical Education.

Articulations - I like  
joints. I know the names  
in French, but could explain  
in English. Vertebrales of  
the back-bone. We did  
not have to know all the  
structures of the human  
body for this course.

Antagonists.

Muscles - the most im-  
portant ones <sup>only</sup> muscle  
group, their action etc.  
like: Sterno-Cleido-Mastoidien,  
Deltoides, biceps, trapèze, angu-  
laire, Rhomboïde, pectoraux,  
Diaphragm, Fessiers,  
quadricèps, soleaire.

Some important exercises  
for the neck, f back,  
Abdomen etc; f statistic  
mouvements, voluntary  
+ involuntary muscles.

Exercises with resis-  
tance. Contraction of  
muscles. Respiration  
exercises. In this  
course we were  
not required to know  
the nervous system  
nor the circulatory



system.

Not Part II Mechanics,  
we had very little  
about this.

Part III, not X.  
we did have XI not (dine)  
nor (archery), XII,

In XIII all the following  
chapters we did not  
have to explain all  
those sports, but we  
had more gymnastics  
exercises, as our kind  
of study did not deal  
with sports at all, but  
only with the things  
that can be done  
in a more or less small  
Physical Education room.  
Our patients had to be  
treated with corrective  
exercises, but we never  
had to give them sports, so  
were not required to know  
this. We did have Chapter  
XVIII stair climbing,  
reaching, relaxation,  
we did have Chapter  
XIX even more in  
the problems related  
to posture training,  
also we had much more  
in the Postural Deviations.  
If possible I should have to know for this  
exam chapters; # Continued on next page.



to revise chapters;

I, a little of Chapters ~~II~~, ~~III~~, ~~IV~~, (especially the to know the muscular system) a little of Chapter ~~VIII~~.

Then Chapter, X, XI not, dive or archery,

XII not the mechanical actions, and I will only know the most important muscle groups, not all the

small muscles, otherwise I must study my anatomy all over again, besides that I only know the names in French,

XIII ← only a little part of this chapter, I could describe pulling + pushing,

XV only some stunts, the worm walk, single squat and balance

XVIII part of this chapter,

XIX I will know very well, Chapter XIX

Posture training. We also had deformations like scoliose, lordose

lombaire, and Cyphose, and exercises for this,



C. Croce

What I  
had to study  
in my  
Physical  
Therapy  
School for  
Kinesiology.



K I N E S I O L O G Y

Examination Questions

I. (a) Define kinesiology and give its general relationships to certain other sciences.

(b) List at least three of its contributions to the betterment of teaching physical education.

II. (a) Where, in the human body, is the location of motion?

(b) Where, the source of bodily motion?

III. (a) Name the three general classes of joints to which all articulations of the body belong.

(b) Name and give one example each of the six types of freely movable joints.

IV. Answer these questions yes or no:

*X no* → (1) A muscle can only pull; it never pushes.

*no* → (2) Whenever there is nervous stimulation the muscles relax.

*yes* (3) Every muscle has its two ends attached to different bones.

*yes* (4) All muscles are arranged in antagonistic pairs or groups.

*no* (5) The smaller muscles are located where the greatest force is needed.

*no* (6) The human machine has a high degree of efficiency.

*yes* (7) The primary factors in the physiological condition are fatigue, source of food substance, and removal of waste substances from the tissue.

*X yes* (8) The muscles of the body are of three types, smooth, cardiac, and skeletal.

*no* (9) The cardiac is the type directly responsible for motor activity. *involuntary glands, voluntary*

*yes* (10) Muscle activity takes place through the regular processes of metabolism.

*yes* (11) Inertia is a property of all objects.

*no* (12) The human body is stable when in a standing position.

*yes* (13) Gravity is a constant force acting on all bodies.

*no* (14) The two articulating bones of the hip joint are the scapula and the humerus.

*no* (15) The elbow joint is a ball and socket joint.

*X no* (16) The gliding type of joint is best exemplified by the articular processes of the vertebrae. *there is cartilage attachment to the vertebrae*

*yes* (17) The ball and socket joint is perfectly described by its name.