3. Briefly describe the lungs and windpipe of a sheep, and explain how the air is drawn into the lungs and driven out again.

4. Mention and very briefly describe the different parts of the brain, and make a sketch to show their relative positions.

5. Explain the processes of digestion that take place after the food has left the stomach and while it is in the small intestine.

6. How would you proceed to dissect a rabbit so as to show the organs in the thorax ? Make a sketch showing the relative positions of these organs.

7. What is a gland ? Describe the glands situated in the skin.

8. Explain briefly how the blood is kept circulating through the blood-vessels.

No. 61.—Physiology and the Structure of the Body.—For Class C and for Civil Service Senior.

Time allowed : Three hours. [Attempt all the questions ; and illustrate your answers, wherever possible, by diagrams.]

1. What do you know of the position, structure, and functions of the thoracic duct ?

2. Describe as fully as you can the structures seen in a transverse section through the spinal cord, and contrast this section with one through the cerebellum.

3. Describe fully a lobule of the liver, explaining carefully the relation of its various blood-vessels to it. What is the composition of the bile ? What do you know of the uses of the bile ?

4. Make a diagram showing the organs seen in a transverse section through the thorax of a mammal, and show clearly the arrangement of the pleura.

5. Explain how you would obtain and prepare for the microscope unstained specimens of the following tissues : Tendon, non-striped muscle, yellow elastic ligament. Briefly describe the micro-scopic appearances seen in each case.

6. Describe fully the composition and action of the pancreatic juice, and contrast them with those of the gastric juice.

7. Describe the sympathetic nervous system of a mammal, and say what you know of its special functions.

8. Describe the structure of hyaline cartilage, and explain as fully as you can the process by which bone is formed in cartilage.

No. 62.—Psychology and Ethics.—For Class C.

[No candidate is to answer more than eight questions. Every candidate is expected to attempt the first six questions.]

1. " Psychology is the science of *mental processes* " : examine carefully this definition, giving special emphasis to the words in italics.

2. Define sensation. Is there such a thing as mere sensation ? What light does experimental psychology throw upon the general question ?

3. Trace in outline the process by which an individual becomes conscious of external reality, noting the factors that enter into the process.

4. Examine briefly the relation of the following : Want, appetite, desire, wish, will, purpose, motive, end, conduct, character.

5. What have been the principal views held during recent years with regard to the moral standard ? Give typical examples.

6. What are the cardinal virtues ? Can you reduce them into a simpler form ?

7. Define memory, giving the marks which distinguish a good from a bad memory.

8. What light does mental science throw upon the conception of self ?

9. Discuss fully the process of voluntary decision, and show the bearing of your analysis upon the question of the freedom of the will.

10. What do you understand the true scope of ethics to be ?

No. 63.—Logic.—For Class C.

Time allowed : Three hours.

1. Give the converse and the contrapositive of " If a straight line falling upon two other straight lines makes the alternate angles equal to one another, these two straight lines shall be parallel."

2. Examine the following arguments, putting them in syllogistic form, and naming any fallacies they may contain :—

    (a.) " Seeing that A and B are inseparable, and that C is sometimes found along with B, we know that C and A will sometimes be found together."

    (b.) " The historical novel is an impossibility ; for it proposes to combine fiction with fact, and these are contradictory."

    (c.) " Provided that he has been properly taught, he can himself teach ; for experience makes experts."

3. Is it possible that there should be two syllogisms having a common premise such that their conclusions, being combined as premises in a new syllogism, may give a universal conclusion ? If so, determine what the two syllogisms must be.