

FIRST YEAR EXAMINATION.
ZOOLOGY.

Examiner..... W. E. DEEKS, B.A., M.D.

1. Define : (a) Metamorphosis, (b) Parthenogenesis, (c) Alternation of generations, (d) Parasitism, (e) Polymorphism. Give examples.

2. Describe fully the structure and mode of development of any member of the *Scyphozoa*. Contrast them morphologically with the *Hydrozoa*.

3. Describe the structure of a *Lamellibranch*. Give reasons why they are grouped with the *Gastropoda* and *Cephalopoda*. Name the principal external homologies, and compare the circulatory system in the three groups.

4. Write on the structure, development and social habits of the *Termites*, or Honey bees.

5. State the distinctive characters and the classification of the *Cladocera*. Give a detailed description of any type.

6. Describe *Amphioxus*, and discuss its relations with the *Tunicata* and *Vertebrata* respectively.

7. Classify the *Porifera*, and describe the structure of a simple type.

8. Compare the anterior extremity, a dorsal vertebra, and the circulatory system in (a) Salmon, (b) Frog, (c) Alligator, (d) Pigeon, (e) Horse. Give their Zoological classification.

9. State the distinctive characters and give examples of *Radiaria*, *Urochorda*, *Chilopoda*, *Brachiopoda*, *Gnathostoma*, *Echinidea*, *Marsupialia*, *Diplopoda*, *Chiroptera*, *Nelachii*.

10. Practical examination one hour extra.

PHYSIOLOGY.

Examiner..... { WESLEY MILLS, M.D.
W.S. MORSE, M.D.

FRIDAY, June 5th, 1896.

1. *Germ cells*: (a) Figure and describe each briefly; (b) Figure and describe briefly the changes ensuing when they unite.

2. *Blood*: (a) General composition, expressed in tabular form; (b) Outline of behaviour within and outside of blood-vessels.

3. (a) Contrast arteries, veins and capillaries structurally (noting also exceptions) and functionally; (b) Compare velocity and blood pressure in the different parts of the circuit, explaining the reasons for the differences.

4. Explain (a) the mechanism by which air is made to enter and leave