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OXFORD LOCAL EXAMINATIONS GENERAL CERTIFICATE OF EDUCATION

Summer Examination, 1951

Advanced and Scholarship Level

BIOLOGY, PAPER I

WEDNESDAY, JUNE 27. TIME ALLOWED—3 HOURS

[Write the number of the paper, U I, on the left at the head of each sheet of your answers in the space provided.

Attempt FIVE questions.

Illustrate your answers by diagrams wherever possible. No answer in which this instruction is neglected will receive full marks.]

1. Name **three** carbohydrates found in living organisms and state how they may be recognized. Where are they usually found and what is their importance?

2. Discuss the nature, structure, and function of (a) a spore, (b) a seed, and (c) a sperm.

3. Describe (a) the nutrition, (b) respiration, and (c) reproduction of **one** plant and **one** animal parasite you have studied.

4. What do you consider to be the difference between cilia and flagellae? Where are they found and what is their function in animals and plants?

5. What differences would you expect to find in shoots of a plant (a) grown in the dark, (b) exposed to light entering through a window, and (c) illuminated equally on all sides? How do you account for them?

6. Make a carefully labelled diagram (enlarged to a length of about five inches) of a worker bee. What is the origin, and what use is made by bees, of the following substances : bee bread ; honey ; propolis ; royal jelly ; wax ?

✓ 7. What reactions are carried out by bacteria involved in the nitrogen cycle and what is the importance of these reactions in relation to the metabolism of the bacteria themselves ?

✓ 8. Describe the main parts of the nervous system of a mammal and briefly review their functions.