Roll No. .....

(011/17-I)

5166

B. Sc. EXAMINATION

(First Semester)

ZOOLOGY

First Paper

Life and Diversity from Protozoa to Purifera and Cell Biology-I

Time : Three Hours *Maximum Marks :* 40

Note : Attempt *Five* questions in all. Q. No. 1 is compulsory. Attempt *two* questions from Section A and *two* from Section B.

1. (i) Name the phenomenon which prevents self-fertilization in *Sycon.*

   (ii) Define Parasite.

   (iii) Which cell organelle is called suicide bag ?

(iv) Why are ribosomes called ribonucleio-protein particles ?

(v) What is Ookinete ?

(vi) Name the three elements that form Golgi Apparatus.

(vii) Why is *Plasmodium* called digenetic.

(viii) Which embryonic stage undergoes inversion in *Sycon* ?

(ix) What are Microvilli ?

(x) Which Endoplasmic Reticulum is concerned with detoxification ? $1 \times 10 = 10$

Section A

2. (a) Describe life-cycle, disease caused and prophylaxis of *Trypanosoma.* 5½

(b) Write symptoms, prevention and therapy of Kala-azar. 2

2. (a) Write notes on the following :

(i) Alternation of generation in *Plasmodium*

(ii) Sporogony. 2+2

(b) Describe the structure of sporozoite of *Plasmodium.* 3½

4. Classify the phylum Porifera upto orders giving characters and examples of each group. 7½

5. (a) Give an account of histology of a sponge. 4½

(b) Draw a well labelled diagram of Euryphylous Leuconoid canal system. 3

Section B

6. (a) Write a note on Oxysome. 2

(b) 'Mitochondria are semiatuonomous organelles.' Comment on the statement. 2½

(c) Enlist enzymes of Electron Transport Chain and ATP synthesis in mitochondria. 3

7. (a) Explain active transport system in cells by taking an example of Ca^{++} pump. 4½

(b) Describe chemical composition of plasma membrane. 3

8. (a) Write functions of Rough Endoplasmic Reticulum. 2½

(b) Discuss structural elements of ER. 2½

(c) Discuss various kinds of Lysosomes. 2½

8. (a) Discuss in detail chemical composition of ribosomes in eukaryotes. 4½

(b) List the similarities as well as differences between Cilia and Flagella. 3