



UNIVERSITY OF ESWATINI

2nd SEM. 2018/2019

FINAL EXAMINATION PAPER

PROGRAMME: All BSc. YEAR I

COURSE CODE: ASC104

TITLE OF PAPER: ZOOLOGY

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: CHOOSE ANY FOUR (4) QUESTIONS
WRITE YOUR ANSWERS ON THE ANSWER BOOKLET.

**DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN GRANTED
BY THE CHIEF INVIGILATOR**

QUESTION 1

a. Match the items on the left column (represented by a letter) with the correct definition/description of the term on the right column (represented by a number). For example, write in your answer book Y = 20 **(22 Marks)**

A. Connective tissue	1.has no centralised cavity, ductless, mostly circular
B. Bone	2.Covers surfaces, protects, secretes substances and absorbs substances
C. Blood	3.One celled organism, reproduces asexually, no nucleus
D. Bone marrow	4.has a centralised cavity, mucosa, glands, muscularis mucosae
E. Cartilage	5.Defense mechanism/phagocytosis
F. Macrophages	6.smallest, depend on living host, always harmful obligate parasite
G. Tubular organ	7.Protects important internal organs
H. Compact organ	8.Produces red blood cells, platelets
I. Epithelial tissue	9. Transports oxygen, nutrients, antibodies
J. Viruses	10.Acts as storage for minerals
K. Prokaryotic cell	11.Supports soft tissue, provides attachment points for skeletal muscles

b) Explain the function of cilia and mucus in columnar epithelium. **(3 Marks)**

QUESTION 2 (CHOOSE AND WRITE THE CORRECT LETTER)

a). Which of the following cells would you expect to contain a high density of cytoplasmic intermediate connective tissues?

a. spermatozoa

b. amoeba

c. plant cells

d. epithelial cells

b). Which of the following is not found in the mitochondria matrix?

a. RNA

b. Double stranded DNA

c. Single stranded DNA

d. Ribosomes

c). After phagocytosis, macrophages direct the engulfed material to the;

a. Nucleus

b. Endoplasmic reticulum

c. Lysosome

d. Peroxisome

d). Lysosome are known as the “ suicidal bags” because of ;

a. the parasitic activity

b. the presence of the food vacuole

c. the catalytic activity

d. the hydrolytic activity

e). Acrosome of sperm cell is a modified;

a. Endoplasmic reticulum

b. Golgi apparatus

c. Lysosome

d. Mitochondria

f). Amongst the following which cell organelle is involved in phagocytosis?

a. Golgi body

b. mitochondria

c. Lysosome

d. Endoplasmic reticulum

g). Select the incorrect statement from the following;

a. Chloroplast are generally much larger than mitochondria

b. Chloroplasts and mitochondria contain DNA

c. Both Chloroplasts and mitochondria contain an inner and outer membrane

- d. Both chloroplasts and mitochondria have an internal compartment-thylakoid space bounded by the thylakoid membrane**

h). What are microbes?

- a. viruses, bacteria, fungi, protozoa, worms**
- b. protozoa, fungi, bacteria, worms, rickettsiae, protozoa**
- c. all the above**
- d. none of the above**

i). Select the correct statement from the following, Viruses have the following characteristics;

- a. dependent on host cell, replicate sexually, are spherical shaped, release spores**
- b. obligate parasites, replicate by binary fission, are polyhedral shaped, have a true nucleus**
- c. have a simple nucleus, complex shape, reproduce asexually, release spores**
- d. dependent on host cell, replicate asexually, have a complex shape, are pathogenic**

j). Which one of the following enzymes is not proteinacious in nature?

- (a) Rennin
- (b) Ribozyme
- (c) Pepsin
- (d) Trypsin

k). Sex-linked genes refer to genes:

- (a) present in a particular sex
- (b) controlling secondary sexual characters
- (c) controlling both primary and secondary sexual characters
- (d) present on the sex chromosomes

l). The Pituitary gland in the animal body is an example of ;

- a. Exocrine gland
- b. Compound saccular gland
- c. Endocrine gland
- d. Skin gland

m). Define Taxonomy.

(1.0 Mark)

QUESTION 3

a) Copy both Tables 1 and 2 onto your answer book and complete them by filling your answers in the empty boxes.

Table 1.

(9.0 Marks)

Animal	Tapeworm	Brown ear tick	Round worm
Phylum			
Class			
Order			
Family			
Genus			
Species			

Table 2

(9.0 Marks)

Animal	Pigs	Poultry	Sheep
Phylum			
Class			
Order			
Family			
Genus			
Species			

b) List four (4) types of evidence supporting the Theory of Evolution. (7.0 Marks)

16

QUESTION 4

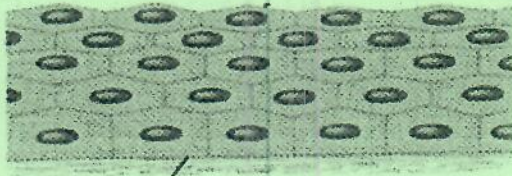
a). Examine Figures A to E below. Complete Table 1.

(20 Marks)

Figure 3



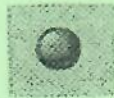
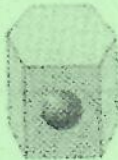
A



B



C



D



E

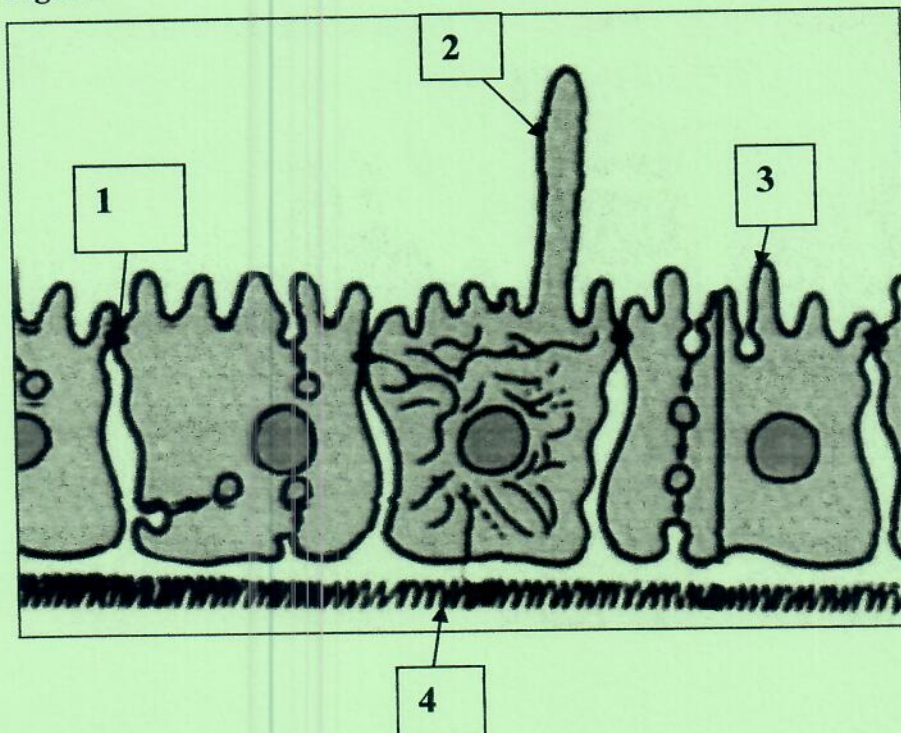
Table 1

Full Name of tissue	Classification	Shape	Site or location

b). Write the names of the structures labelled 1 to 4

(5 Marks)

Figure 4



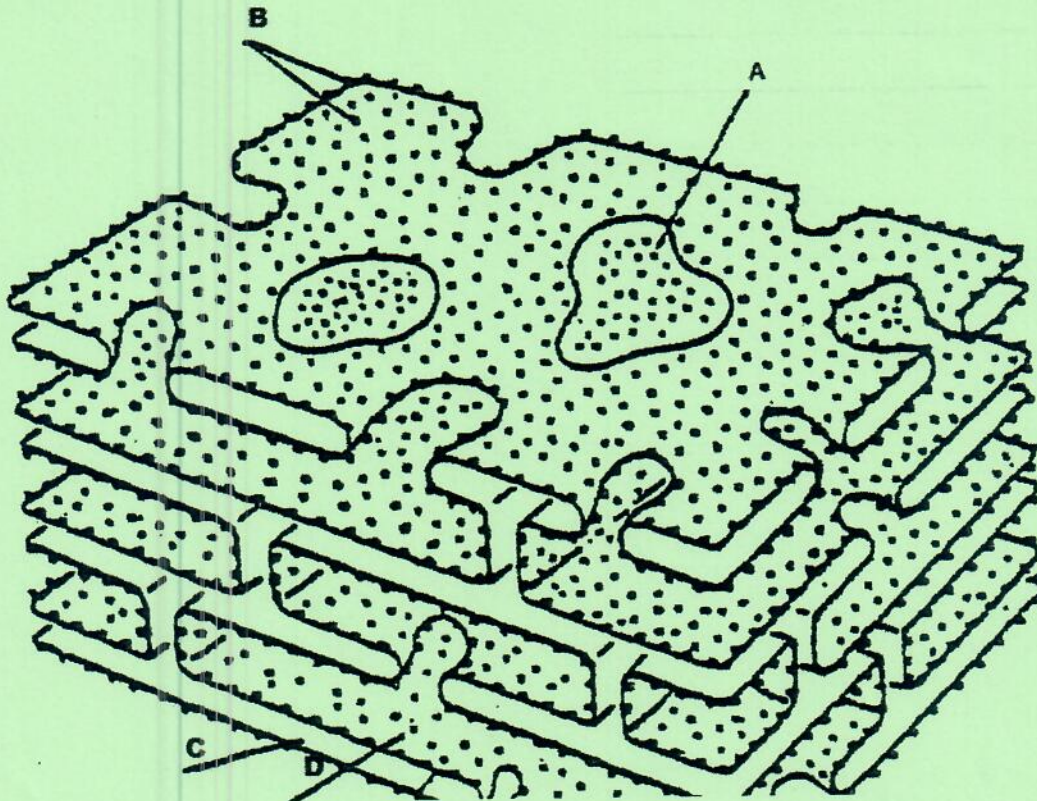
18

QUESTION 5

i). Identify the organ shown below in Figure 5 and name the components labelled A to D.

(5 Marks)

Figure 5



ii). Write short notes on:

a). The clinical significance of white blood cells.

(4 Marks)

b). Objectives of mitosis and meiosis

(10 Marks)

iii). List the three (3) types of common mutations in living organisms (6 Marks)

END OF QUESTION PAPER.