



**EDO UNIVERSITY IYAMHO**  
**EDO STATE**  
**FACULTY OF SCIENCE.**

**2017/2018 ACADEMIC SESSION. FIRST SEMESTER EXAMINATION.**

**DEPARTMENT: BIOLOGICAL SCIENCES (ANIMAL AND ENVIRONMENTAL SCIENCE UNIT)**

**COURSE TITLE: Introduction to Animal and Environmental Biology.**

**COURSE CODE: AEB111 CREDIT UNITS: 3**

**SECTION A: Answer all questions in this section**

**Duration: 2.30hrs**

**Practical questions (10marks)**

- a) Name the types of cells obtained in biology
- b) Give 5 parts of a cell and state the functions of the parts listed.
- c) During your practical session, you were provided with a substance for staining the onion root tip. Provide the name of the stain.
- d) What did you use to collect a swab of cheek cell from your mouth?
- e) Why was the onion root tip used to check for growth (mitosis)
- f) List 5 parts of the microscope and enumerate 5 ways of how best to care for the microscope

## **SECTION B**

**Answer any 2 questions in this section**

1a. Differentiate between simple diffusion and facilitated diffusion. (2marks)

**1b.** Define the following terms: (a) Cell (b) Diffusion

(c) Ecology (d) Pollution (e) Competition (5marks: 1 mark each).

(1c.) Name 2 sampling methods you know. (2mark.)

(1d) A quadrat measuring  $1\text{m}^2$  was thrown 200 times in a terrestrial habitat. A plant *Tridax procumbens* occurred in 20 plots. Assuming the plant occurred 25 times when the throws were made. Calculate the: (i) frequency (ii). Frequency percentage (iii). Density of the habitat. (6marks, 2marks each.).

2a. Define the following terms: (i). Environment (ii). Habitat (iii). Ecological niche (iv). Population (v). Atmosphere. (1 mark each).

2b. What is smog? Give 2 effects of smog (3marks).

2c. Discuss sewage as a biodegradable pollutant both in terrestrial and aquatic environment. (7marks).

3a Define the following terms: (i). Osmosis (ii). Active transport (iii). Community  
(1mark each).

3b. Differentiate between the following terms: (i). Autecology and synecology  
(ii) Channel protein and Carrier protein (iii). Intra specific and interspecific competition  
(1 mark each).

3c. Exclusively discuss Endocytosis as a means of transporting materials across the cell membrane.  
(8marks).

3d. Name the two classes of pollutants you know and give 1 example of each class (1mark).

### **Section C**

#### **Answer all questions in this section**

- 1) What are metazoans? (3marks)
- 2) Discuss the types of classification in biology (3marks)
- 3) Give a detailed classification of the animal kingdom (7marks)
- 4) Give two distinguishing characteristic of the chordates (2marks)
- 5) Give three distinguishing characteristics of each the classes in the phylum mollusca (5marks)
- 6) Define the following
  - a) coelom, (b) vertebrate (c) fossils, (d) extant (e) nomenclature (5marks)