



NATIONAL OPEN UNIVERSITY OF NIGERIA
UNIVERSITY VILLAGE, PLOT 91 CADASTRAL ZONE, NNAMDI AZIKIWE
EXPRESS WAY, JABI - ABUJA.
FACULTY OF SCIENCE
SEPTEMBER, 2020_1 Examination

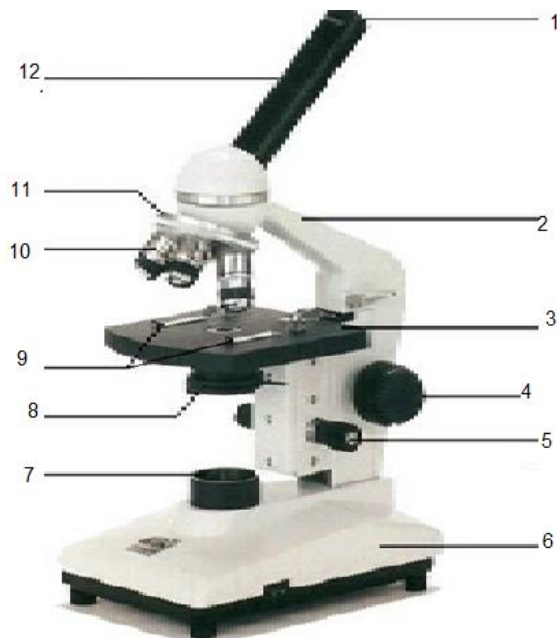
BIO 303: General Cytology

TIME: 2 Hours

CREDIT UNITS: 2

INSTRUCTION: Answer FOUR questions in all .Question 1 is compulsory

- 1a. Write briefly on numerical variations in chromosomes (8 marks)
- 1b. Write briefly on Neutral Fats (Fats) (7 marks)
- 1c. Recount the events that occur in germ cells during Telophase 2 (5 marks)
- 1d. Highlight the contributions of the following in the development of the electron microscope
 - i. J.J Thomson (1897)
 - ii. Louis de Broglie (1924)
 - iii. Hans Busch (1926)
 - iv. Siemens (1939)
 - v. Cambridge Instruments (1965) (5 marks)



2 a Give the name of the object shown (1 mark) b. Label the numbered parts (5 marks)

c. Give the function of **nine** of the labelled part (9 marks)

3. Write short notes on the following stages of embryogenesis

a. Cleavage

b. Gastrulation

c. Organogenesis (15 marks)

4a. Write briefly on the secondary structure of protein (3marks)

4b. In a tabular form, differentiate between DNA and RNA (12 marks)

5. Discuss role of the major check points in the regulation of the animal cell cycle (15 marks)