



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

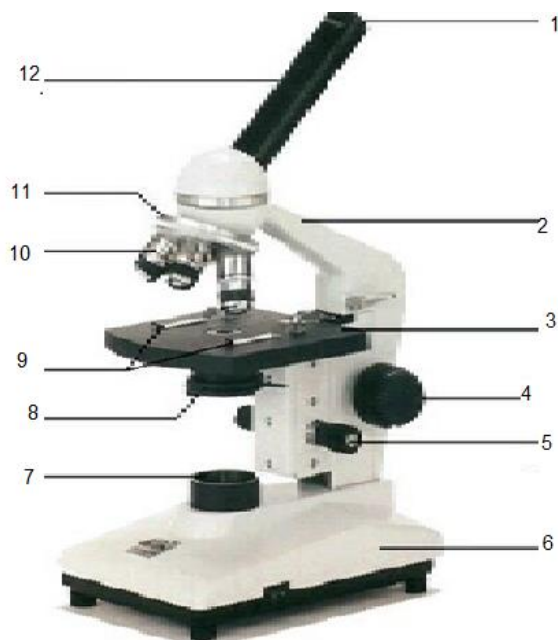
BIO 303: General Cytology

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)