



PRESIDENCY UNIVERSITY, BENGALURU
SCHOOL OF ENGINEERING

Max Marks: 60

Max Time: 3 hours

Weightage: 30 %

Set A

COMPREHENSIVE EXAMINATION

I Semester 2016-2017 Course: **BIO A 103 General Biology**

12th January 2017

Instructions:

- i. Closed book exam comprises Part A, B and C and open book exam involves only part D.
- ii. Separate answer booklet must be used for open book examination.
- iii. Only prescribed text book is permitted for open book examination.

Part A

(5 Q x 2 M= 10 Marks)

1. Which cell organelle is called 'power house of the cell'?
2. Who is known as 'Father of Genetics'?
3. Write the full form of RNA.
4. Write one function of haemoglobin.
5. Define motor neuron.

Part B

(4 Q x 5 M= 20 Marks)

6. Differentiate between diffusion and osmosis.
7. Draw a well labeled diagram of chloroplast.
8. Differentiate between aerobic and anaerobic respiration.
9. Write the chemical reaction for photosynthesis and respiration.

Part C

(1 Q x 10 M= 10 Marks)

10. Mention various components of blood? Differentiate between arteries and veins?

Part D

(2 Q x 10 M= 20 Marks)

11. 'DNA finger printing is a beneficial technique in the present era'. Justify the statement.
12. Integration of nervous and endocrine function is significant in the maintenance of hormonal balance in human body: Explain.



PRESIDENCY UNIVERSITY, BENGALURU
SCHOOL OF ENGINEERING

Max Marks: 50

Max Time: 50 Mins Weightage: 15 %

Set B

MID TERM EXAMINATION
MAKE UP

I Semester 2016-2017

Course: Bio A :103 General Biology /

18 October 2016

BIO A101

Instructions:

- i. Write legibly

Part A

(5 Q x 2M=10 Marks)

1. List any two characteristics of life.
2. Name the transport process in which molecules are moved across the membrane from an area of low concentration to an area of high concentration, by spending energy.
3. Name the transport process in which molecules move across the membrane from an area of high concentration to an area of low concentration.
4. Differentiate between prophase of animal cell and prophase of plant cell.
5. List any two methods for treatment of cancer.

Part B

(4Qx 5M= 20 Marks)

1. Define osmosis. Explain the effect of isotonic, hypotonic and hypertonic solution on plant cells.
2. What are Lysosomes? List its any three functions.
3. Define cancer. List its causes.
4. Define Kinetochore .Differentiate between mitosis anaphase and Meiosis Anaphase I ?

Part C

(2Qx 10 M= 20 Marks)

1. What is Plasma membrane? Name all the components of plasma membrane and list one function of each.
2. Name the four phases of mitosis in correct order of occurrence. Define crossing over and its characteristic features.



PRESIDENCY UNIVERSITY, BENGALURU
SCHOOL OF ENGINEERING

Max Marks: 50

Max Time: 50 Mins Weightage: 25 %

Set A

MID TERM EXAMINATION

I Semester 2016-2017

Course: Bio A: 103 General Biology

18 October 2016

Instructions:

- i. Write legibly

Part A

(5 Q x 2M=10 Marks)

1. Define Pseudoscience.
2. List any one function of peroxisomes.
3. What is the function of Ribosomes?
4. Define karyotype. Name the cells which are generally used for karyotyping?
5. Enumerate any two significance of the process of meiosis?

Part B

(4Qx 5M= 20 Marks)

1. Differentiate between Prokaryotic and Eukaryotic cells. (Any five difference)
2. Name the organelles which are known as energy convertor. List any three ways how energy convertor organelles are different from other membrane bound organelles.
3. List various stages of the cell cycle in eukaryotes and characteristic features of each.
4. Define cell division. List any three functions of cell division

Part C

(2Qx 10 M= 20 Marks)

1. Draw a well labeled diagram of Endoplasmic reticulum. Name its types and function of each.
2. Differentiate between mitosis and meiosis?