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Seat No.: _____

No. of Printed Pages: 02

SARDAR PATEL UNIVERSITY
B. Sc. (ZOOLOGY) – Fifth Semester Examination
Friday, 15th November, 2019
10:00 a.m. to 1:00 p.m.
US05CZOO03: CELL BIOLOGY

- Note: 1) Figures to the right indicate marks
2) Draw diagram wherever necessary

MARKS: 70

Q-1 MULTIPLE CHOICE QUESTIONS:

[10]

1. Methylene blue is
A) basic stain B) acidic stain C) neutral stain D) none
2. The fixative Carnoy's fluid is contains.....
A) 3 parts glacial acetic acid and 1 part ethanol
B) 3 parts ethanol and 1 part glacial acetic acid
C) 3 parts glacial acetic acid and 1 part Methanol
D) 3 parts ethanol and 1 part acetone
3. Fluid mosaic model of plasma membrane proposed by
A) Danielli and Davson B) David Roertson
C) Hilleir and Hoffman D) Singer and Nicolson
4. The inner membrane of the mitochondria is usually highly convoluted forming a series of infolding known as
A) thylakoids B) lamellae C) cristae D) grana
5. if centromere found on the proximal end of chromosome is known as
A) telocentric B) acrocentric C) sub metacentric D) metacentric
6. The nucleus is separated from the surrounding cytoplasm by a nuclear membrane, which is
A) single layer with pores B) double layers with pores
C) single layer without pores D) double layers without pores
7. Which of the following is NOT an example of Giant chromosomes?
A) Polytene chromosome B) sex chromosome
C) Lampbrush chromosome D) B-chromosome
8. Term basal body is associated with the development of
A) cilia and flagella B) cell plate
C) phragmoplast D) kinetochore
9. The size of ribosomes and their subunits are usually given in
A) Angstrom (A^0) B) Micrometer (μ)
C) Svedberg units (S) D) Diameter
10. Cilia and flagella of eukaryotic cells are made up of _____.
A) microfilaments B) microtubule C) intermediate filament D) all

①

(P.T.O)

Q-2 ANSWER IN SHORT [ANY TEN]

[20]

1. Write about magnification of microscope
2. Write about Leeuwenhoek's microscope
3. What is chromatography?
4. What is permeability in Plasma Membrane?
5. What is Pinocytosis?
6. Draw a labeled diagram of golgi body
7. Distinguish between Diploid- Haploid.
8. What is chromosomal aberrations? Give the name of two kinds of aberrations.
9. Give the names of different types of giant chromosomes.
10. Write about nuclear pores.
11. Define the terms peroxisome and glyoxysome.
12. Write the functions of microtubules.

Q-3 A) Give a detailed account on Electron microscope

[05]

B) Explain Radio Immuno Essay

[05]

OR

Q-3 A) Write a note on Electrophoresis

[05]

B) Explain methods of Fixation and staining

[05]

Q-4 A) Explain the structure and major functions of mitochondria

[05]

B) Describe the types and structure of endoplasmic reticulum.

[05]

OR

Q-4 A) Explain the fluid mosaic model and functions of plasma membrane.

[05]

B) What are the lysosomes? Describe the polymorphism in lysosomes.

[05]

Q-5 Give an account on morphology and structure of chromosomes.

[10]

OR

Q-5 What is polyploidy? Describe different types of polyploidies.

[10]

Q-6 What is meant by 70S and 80S ribosome?

Describe structure of both types of ribosomes.

[10]

OR

Q-6 Explain ultra structure of cilia and basal bodies

[10]