SEAT No._____ No. of Printed Pages: 02

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SARDAR PATEL UNIVERSITY

Bachelor of Science (B.Sc.)
Fifth Semester Examination (NC) December – 2020
Tuesday, 29th December, 2020
2:00 P.M to 4:00 P.M
Subject: Biochemistry
COURSE: US05CBCH04
(Cell Biology)

Note: (1) Figures to the right indicate marks.
(2) Draw a neat and labeled diagram, wherever necessary. **Total Marks: 70**

Q. 1 Choose the most appropriate answer from the four alternatives given: [10]

(1) _____are round cells.
(a) Plant cells (b) White cells (c) Animal cells (d) None

(2) In prokaryotic ____ is absent or rare.
(a) DNA (b) Chromosome (c) Ribosome (d) Microtubules

(3) Animal cells have _____vacuoles
(a) Large (b) small (c) micro (d) none

(4) The major protein in muscle is _____
(a) Actin (b) Beta-tubulin (c) Myosin. (d) None of the above

(5) The position of centriole determines the position of the _____
(a) Nucleus (b) Miosin (c) Centrosome (d)Actin

(6) The nucleus contains _____ for all cellular structure.
(a) Blueprint (b) Nucleoprint (c) Both a & b (d) None of the above

(7) The fluid components of cytoplasm are_____
(a) Plasma (b) Cytosol (c) Granules (d) none.

(8) As DNA replication continues, _____ is destroyed
(a) Cyclin E (b) Gl-cycline (c) G2-cycline (c) None

(9) Haploid cells are a result of the process of_____
(a) Mitosis (b) Gene (c) Meiosis (d) None of the above

(10) ____ Protein is key player in cell death.
(a) P53 (b) p34 (c) Protein 58" (d) TP59

Q.2 (a) Fill in the blanks [4]

(1) Animal cells does not have _____
(2) Microtubules is a type of _____
(3) Contractile vacuoles pump out _____
(4) As DNA replication continuous, _____ is destroyed.

(P.T.O.)

Q.2 (b) Write True and False [4]

(1) Animal cells have cell wall.
(2) The position of the centriole determines the position of actin.
(3) Proteasomes are cytoplasmic lipid complex.
(4) Golgi apparatus is complex of smooth membranous sacccuale.

Q.3 Answer any TEN from the following: [20]

(1) Define Plant cell and Chloroplast.
(2) What is plasma membrane?
(3) Enlist functions of cell walls.
(4) Write about eukaryotic cilia and flagella.
(5) Write importance of lysozymes and write about structure of plasmalemma.
(6) Write importance of Centrioles.
(7) What are adult stem cells?
(8) What is Autophagy?
(9) What are the unique properties of all stem cells?.
(10) Write about key player in apoptosis.
(11) What is cell division?
(12) Why should a cell commit suicide?

Q.4 Write Answer in detail (Any four) [32]

(1) Write account on genes of prokaryotic and Eukaryotic.
(2) Explain Fluid Mosaic model.
(3) Explain in detail about "Mechanism of Apoptosis".
(4) Write a note on centrioles and explain its functions.
(5) Write on SER.
(6) Classify Endoplasmic reticulum and explain its structure and functions.
(7) Draw a diagram and give a detail note on myosin filament
(8) Write about adult stem cells.