

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2018
(First Semester)

Branch -**BIOTECHNOLOGY**

CELL DYNAMICS

Time: Three Hours

Maximum: 75 Marks

Answer ALL questions
ALL questions carry EQUAL marks

(2 + 5+ 8)

- 1 a Define cell motility.
b Discuss the methods of cell disruption,
c Comment on the dynamics of microtubules.
OR
d What is FRET?
e Explain the role of motor proteins.
f Write an account on fixation for electron microscopy.
- 2 a What are integrins?
b. State the features of cancer cells,
c Analyze the intercellular communication.
OR
d Comment on desmosomes.
c Discuss the structure and functions of microvilli,
f Give a note on cellular differentiation.
- 3 a Mention the role of MDR proteins.
b Give an account on nerve conduction.
c Describe Na⁺K⁺ pump.
OR
d Define neurotransmitters.
e Explain the structure of fluid mosaic model of plasma membrane,
f How does active transport takes place in cell membrane?
- 4 a State the functions of peroxisomes.
b Write an account on non cyclic photophosphorylation,
c How does the nuclear pore complex regulate the protein transport in the nucleus?
OR
d Comment on thylakoids.
e Bring out the functions of mitochondria.
1' Illustrate the structure and functions of glyoxysomes.

a Define necrosis,
b Comment on signaling molecules,
e Explain JAK / SEAT pathway.
OR
1' What is cell cycle?
g Give an account on cell aging,
h Elaborate notch and lipid signaling.