

Shahjalal University of Science and Technology
4th Year 1st Semester
BMB-426, Cell Biology and Cell Signaling
Term Test- 1

Time- 1hr

Full marks- 10

1. Write the following statements true or false. If false write the correct statement. 0.5×6=3

- a) Microtubules are much more rigid than actin filament because of their organization.
- b) When the rate of addition of subunits to a growing filament is slower, a cap of subunits with bound nucleotide is formed. This is called ATP or GTP caps.
- c) Vimentin like Intermediate filaments are found in epithelial cells and their derivatives.
- d) Both microtubule depolymerizing agent such as Vinblastine and microtubule polymerizing agent like taxol are used in cancer treatment.
- e) Thymosin and Profilin are two actin binding proteins which can both bind to a single actin monomer at a time.
- f) Motor proteins generate force for movement by coupling ATP hydrolysis to conformational changes.

2. Write about the structural arrangements of Cilia and Flagella. 1.5

3. Name the four actin-cross-linking proteins. 1

4. Write about the role of following proteins: a) Map 3

b) Titin

c) Stathmin

5. Write about γ -TuRC. 1.5