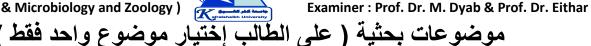
Kafrelsheikh University

Faculty of Science

Biology (Botany & Microbiology and Zoology)



Date: June 2020

Subject / Plan Physiology & Systematic 1 st year

1 – Properties of Colloids

(definition of solution - types of solutions - true solution - suspension - emulsion and colloidal solution - Properties of colloids)

2 - Role of diffusion in plant life

(definition of diffusion – bases of diffusion – Importance of diffusion for - Plant life - factors affecting rate of diffusion)

3 - Importance of Osmosis in water transport in plants

(definition of osmosis - plant cell as osmotic system - osmotic pressure - Forces affecting osmosis types of external solution related to plant cell – Role of osmosis in water transport – plasmolysis)

4 - Permeability through living membranes

(chemical structure of plasma membrane - definition of permeability – types of membranes according to permeability – permeability of water, gases, electrolytes and organic compounds)

5 - Enzymes

(definition of enzymes - structure of enzymes - specificity of enzymes - mechanism of action - factors affecting rate of enzyme reaction)

- 6- General characters of viruses. Virus Covid-19 (general information, structure, origin, infection and transmission, symptoms, protection) as example.
- 7- General characters of viruses. Poliovirus (general information, structure, origin, infection and transmission, symptoms, protection) as example.
- 8- General character of prokaryotic organisms and highlight on bacteria as a source for energy.
- 9- General character of prokaryotic organisms and highlight on role of bacteria in genetic engineering.
- 10- General character of Mycota and highlight on Mushroom is a source of protein.
- 11- General character of algae and highlight on Biodiesel from algae.