

وانه كانی تاقیکردنه وهی توانستی زانستی بۆ خویندنی دکتۆرا

بابه تی گشتی		بابه تی پسیپوری		پسیپوری
Subjects	Topics	Subjects	Topics	
<b><u>Cell Physiology</u></b>	1-Signal transduction pathways 2-Nerve electrical potentials 3-Neurotransmitters 4-Plasma membrane transports <b>References:</b> 1-Physiology by Boron 2-Ganong' review of medical physiology 3-Physiology, Costanzo	<b><u>Medical Genetics</u></b>	1-Immunogenetics 2-Gene therapy. 3-Epigenetics/molecular basis. 4-Genetic basis of cancer. 5-Human cytogenetics.	Genetics
<b><u>Molecular Biology</u></b>	1. Central dogma of Molecular biology 2. Gene regulation in Prokaryotes 3. Gene regulation in Eukaryotes 4. Mobile genetic elements			
<b><u>Biochemistry</u></b>	1-Carbohydrates • Importance of carbohydrates • Classes of Carbohydrates and their examples • Glycolysis and Pentose phosphate 2-pathway Lipids • Importance of Lipids • Classes of lipids • Omega fatty acids • $\beta$ -oxidation • Cholesterol and Phospholipids Protein 3-Amino acids • Classes of amino acids • Protein structure • Classification of protein according to their functions 4-Enzymes • Classes of enzyme • Mechanism of enzyme's action • Factors affecting the activity of enzyme.	<b><u>Molecular Genetics</u></b>	1-Human genome project 2-Human genome organization 3-Genetic variation and single nucleotide polymorphism 4-Understanding of genetic basis of cell cycle 5- Introduction to the CRISPR/Cas9 system	

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<b><u>Molecular Biology</u></b>	1. Central dogma of Molecular biology 2. Gene regulation in Prokaryotes 3. Gene regulation in Eukaryotes 4. Mobile genetic elements			
<b><u>Biochemistry</u></b>	1-Carbohydrates • Importance of carbohydrates • Classes of Carbohydrates and their examples • Glycolysis and Pentose phosphate 2-pathway Lipids • Importance of Lipids • Classes of lipids • Omega fatty acids • $\beta$ -oxidation • Cholesterol and Phospholipids Protein 3-Amino acids • Classes of amino acids • Protein structure • Classification of protein according to their functions 4-Enzymes • Classes of enzyme • Mechanism of enzyme's action • Factors affecting the activity of enzyme.	<b><u>Genetic Engineering</u></b>	1-Gene modification 2-Gene Cloning 3-Gene Expression 4-Recombination DNA applications	

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<b><u>Molecular Biology</u></b>	1. Central dogma of Molecular biology 2. Gene regulation in Prokaryotes 3. Gene regulation in Eukaryotes 4. Mobile genetic elements			
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<b><u>Molecular Biology</u></b>	1. Central dogma of Molecular biology 2. Gene regulation in Prokaryotes 3. Gene regulation in Eukaryotes 4. Mobile genetic elements			
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Subjects	Topics	Subjects	Topics	
<u>Ecology</u>	1-The Ecosystem 2-Biogeochemical cycles 3-Energy flow 4-The Ecosphere	<u>Plant Physiology</u>	1-Effect of Natural Plant products on plants 2-The role of Natural Plant products in Medicine 3-Terpene compounds 4-Phenol Compounds 5-Nitrogen containing Compounds	Plant Physiology
<u>Molecular Biology</u>	1. Central dogma of Molecular biology 2. Gene regulation in Prokaryotes 3. Gene regulation in Eukaryotes 4. Mobile genetic elements	<u>Medicinal Plants</u>	•Anticancer natural products •Herbal medicine used for treatment of gastrointestinal system diseases •Herbal medicine used for treatment of respiratory system diseases •Alkaloid-containing medicinal plants •Important medicinal plants containing glycosides  <u>Reference:</u> Pharmacognosy- 16th ed. Trease & Evans (2009).	
<u>Biochemistry</u>	1-Carbohydrates • Importance of carbohydrates • Classes of Carbohydrates and their examples • Glycolysis and Pentose phosphate 2-pathway Lipids • Importance of Lipids • Classes of lipids • Omega fatty acids • β-oxidation • Cholesterol and Phospholipids Protein 3-Amino acids • Classes of amino acids • Protein structure • Classification of protein according to their functions 4-Enzymes • Classes of enzyme • Mechanism of enzyme's action • Factors affecting the activity of enzyme.			

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<b><u>Ecology</u></b>	1-The Ecosystem 2-Biogeochemical cycles 3-Energy flow 4-The Ecosphere	<b><u>Anti-Fungal Agents</u></b>	1- Antifungal therapy 2- Flavonoids and essential oils as antifungal agents 3- Antifungal resistance 4- Secondary metabolites and their effects as anti-fungal agents 5- Differences between antibiotic and antifungal	Anti-Fungal agents
<b><u>Molecular Biology</u></b>	1. Central dogma of Molecular biology 2. Gene regulation in Prokaryotes 3. Gene regulation in Eukaryotes 4. Mobile genetic elements	<b><u>Medicinal Plants</u></b>	<ul style="list-style-type: none"> <li>•Anticancer natural products</li> <li>•Herbal medicine used for treatment of gastrointestinal system diseases</li> <li>•Herbal medicine used for treatment of respiratory system diseases</li> <li>•Alkaloid-containing medicinal plants</li> <li>•Important medicinal plants containing glycosides</li> </ul>	
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