

Biological Science - Class X

Syllabus for Public Examination – 2020-2021

S.No	Name of the Lesson	Topics Included	Topics Deleted
1	Nutrition	<p>Autotrophic Nutrition ( Page No.01)</p> <p>Photosynthesis ( Page No.02)</p> <p>Activity -2 Carbon dioxide is necessary for Photosynthesis ( Page No: 5,6)</p> <p>Lab Activity Oxygen is produced during photosynthesis in the presence of light ( Page No.6)</p> <p>Where does photosynthesis takes place ? ( Page No: 9, 10)</p> <p>Mechanism of Photosynthesis ( Page No 11,12 )</p> <p>Heterotrophic Nutrition ( Page No.12 )</p> <p>Nutrition in Human beings ( Page No: 13,14)</p> <p>Activity – 5 Studying Enzymes chart ( Page No: 15)</p> <p>Diseases due to malnutrition ( Page No: 17, 18)</p> <p>Vitamin deficiency diseases ( Page No: 18,19 )</p>	<p>Activity – 1 Presence of starch in leaves ( Page No: 3)</p> <p>Contribution of various scientists in understanding of photosynthesis ( Page No: 4,5,6,7,8 &amp; 9)</p> <p>Activity – 3 Sunlight is necessary to form starch in green plant ( Page No: 8)</p> <p>Parasitic nutrition in cuscuta ( Page No : 13)</p> <p>Activity -4 Peristaltic movement ( Page No: 14,15)</p>
2	Respiration	<p>Events in Respiration ( Page No: 26)</p> <p>Pathway of Air ( Page No: 27,28)</p> <p>Epiglottis and passage of air ( Page</p>	<p>Discovery of gases and respiration ( page No 24,25,26)</p> <p>Breathing ( Page No:</p>

		<p>No: 29)</p> <p>Activity -1 ( Page No: 29)</p> <p>Mechanism of respiration in human beings ( Page No: 30,31)</p> <p>Gaseous exchange ( Page No: 31, 32)</p> <p>Cellular Respiration ( Page No: 33,34)</p> <p>Lab Activity ( Page No: 37,38)</p> <p>Respiration in plants ( Page No: 40,41)</p> <p>Activity – 3 ( Page No: 41)</p> <p>Activity – 4 ( Page No: 42)</p> <p>Photosynthesis Vs Respiration ( Page No: 42,43)</p>	<p>27)</p> <p>Can energy be released without oxygen ( Page No: 34,35,36)</p> <p>Activity -2 Observing changes during combustion of sugar ( Page No: 38)</p> <p>Heat production by living organisms ( Page No: 39)</p> <p>Evolution in gaseous exchange system ( Page No: 39,40)</p>
3	Transportation	<p>Introduction ( Page No: 48)</p> <p>Activity -1 ( Page No: 49)</p> <p>Activity -2 ( Page No: 49)</p> <p>Activity - 3 ( Page No: 50)</p> <p>Lab Activity ( Page No: 51)</p> <p>Internal structure of Heart ( Page No: 52,53,54)</p> <p>Arteries, Veins and Blood capillaries ( Page No: 56,57)</p> <p>The Cardiac Cycle ( Page No: 58,59)</p> <p>Single/Double Circulation ( Page No: 59)</p>	<p>The blood vessels and circulation – contribution of scientists ( Page No: 54,55,56)</p> <p>Activity – 4 Observation of Arteries and Veins ( Page No: 57)</p> <p>The blood vessels and circulation ( Page No: 54,55,56)</p> <p>Evolution of Transport system ( Page No: 61,62)</p> <p>The mechanism by</p>

		<p>Lymphatic system ( Page No: 60,61)</p> <p>Blood Pressure ( Page No: 62)</p> <p>Coagulation of Blood ( Page No: 63,64)</p> <p>Activity – 5,6 ( Page No: 64,65,66)</p> <p>Transport of manufactured food ( Page No: 67,68,69)</p>	<p>which the water travel through the plant ( Page No: 66,67)</p> <p>Transport of mineral salts ( Page No: 67)</p>
4	Excretion	<p>Introduction ( Page No: 74,75)</p> <p>Excretion in human beings ( Page No: 75)</p> <p>Lab Activity ( Page No: 77,78)</p> <p>Internal Structure of Kidney ( Page No: 78)</p> <p>Structure of Nephron ( Page No: 79)</p> <p>Mechanism of Urine formation ( Page No: 80,81,82)</p> <p>Dialysis ( Page No: 83)</p> <p>Kidney transformation ( Page No: 84)</p> <p>Excretion and release of substances in plants ( Page No: 86,87,88,89)</p>	<p>Table – 2 Dept. of Biochemistry ( Page No: 76,77)</p> <p>Composition of Urine ( Page No: 82,83)</p> <p>Other pathways of excretion ( Page No: 84,85)</p> <p>Excretion in other organisms ( Page No: 85,86)</p> <p>Excretion Vs Secretion ( Page No: 89)</p>

5	<i>Co-ORDINATION</i>	<p>Introduction( Page No: 94)</p> <p>Responding to Stimuli ( Page No: 95)</p> <p>Activity – 1 ( Page No: 95)</p> <p>Structure of Nerve cell Activity -2 ( Page No: 96,97)</p> <p>Pathways, from stimulus to response ( Page No: 97,98)</p> <p>Reflex arc ( Page No: 99,100)</p> <p>Central Nervous system, Brain ( Page No: 100,101)</p> <p>Peripheral Nervous system ( Page No: 102,103)</p> <p>Other chemical Co ordinator ( Page No: 106,107)</p> <p>Feed Back Mechanism ( Page No: 107,108)</p> <p>Control Mechanism in plants ( Page No: 109,110)</p> <p>Tropic and plastic movements in plants ( Page No: 112)</p>	<p>Integrating pathways-Nervous coordination (P.No.96)</p> <p>Activity-3</p> <p>Knee jerkreflex (P.No.98 &amp; 99)</p> <p>Spinal Cord (P.No.102)</p> <p>Autonomous nervous system (P.No. 104 &amp; 105)</p> <p>The story of insulin (P.No.105 &amp; 106)</p> <p>Contributions of scientists in understanding the plant hormones (from Charies Darwin to completion of went ex- periment) (P.No.111)</p>
6	Reproduction	<p>Introduction ( Page No: 116)</p> <p>Asexual mode of reproduction ( Page No: 117, 118)</p> <p>Vegetative Propagation ( Page No: 118, 119)</p> <p>Spore formation ( Page No: 120)</p>	<p>Activity-1 Formation of bacterial colony in milk (P.No.116&amp;117)</p> <p>Activity -2 Observation of pollen grain (P.No.129)</p>

		<p>Lab Activity ( Page No: 121,122)</p> <p>Sporophyll ( Page No: 122)</p> <p>Sexual reproduction ( Page No: 122,123,124,125)</p> <p>Child Birth ( Page No: 126)</p> <p>Sexual reproduction in plants ( Page No: 127,128)</p> <p>Structure of Ovule ( Page No: 129,130)</p> <p>Activity-3 Seed germination ( Page No: 131)</p> <p>Cell division in human beings, cell cycle ( Page No: 134,135,136)</p> <p>Reproduction health ( Page No: 137)</p> <p>Birth control methods ( Page No: 138,139)</p> <p>Fighting against social ills ( Page No: 139,140)</p>	<p>Cell division and continuation of life, Cell division in human being (P.No. 132 to 134)</p>
7	<i>Coordination in life process</i>	<p>Introduction ( Page No: 144)</p> <p>Feeling Hungry( Page No: 145,146)</p> <p>Activity – 2 ( Page No: 146,147)</p> <p>Activity – 3 ( Page No: 147,148)</p> <p>Activity – 4 ( Page No: 148,149)</p> <p>Activity – 6 ( Page No: 150)</p> <p>Activity – 7 ( Page No: 151)</p> <p>Peristaltic movement in oesophagus ( Page No: 153,154)</p>	<p>Outcome of sensation of hunger, Taste and smell are closely related, Activity-2 and Activity-3 (P.No.146 &amp; 148)</p> <p>Activity-5 To show break down of food by using the modal of chalk piece kept in vinegar (P.No. 149)</p>

		<p>Lab Activity ( Page No: 156,157)</p>	<p>Activity-8 Testing PH of mouth at intervals of one hour (P.No. 152)</p> <p>Travel of food through oesophagus (P.No. 153)</p> <p>Activity-9 Making model of oesophagus (P.No.153)</p> <p>Stomach the mixer and digester (P.No.154 to 156)</p> <p>Travel of food from stomach to the intestine (P.No.157 &amp; 160)</p>
8	Heredity	<p>New Characters and variations ( Page No: 166)</p> <p>Activity - 1,2 ( Page No: 167,168)</p> <p>Activity - 3 ( Page No: 168,169,170,171,172,173)</p> <p>Parent of progeny ( Page No: 177)</p> <p>How do traits get expressed ? ( Page No: 177)</p> <p>Sex determination in man ( Page</p>	<p>Dihybrid Cross ( Page No: 175, Annexure)</p> <p>Activity-5 Variations in beetle population (P.NO. 179 to 181)</p> <p>Speciation (P.No. 184 &amp; 185)</p> <p>Carbon dating (P.No. 187)</p> <p>Human evolution</p>

		<p>No: 178)</p> <p>Acquired and inherited characters and evolution , Lamarkism ( Page No: 145,181)</p> <p>Darwinism ( Page No: 182,183,184)</p> <p>Evidence of Evolution ( Page No: 185,186,187)</p> <p>Human Being – a moving museum( Page No: 189)</p>	(P.No. 188)
9	Our Environment	<p>Introduction ( Page No: 193,194,195)</p> <p>Ecological Pyramids ( Page No: 195,196,197,198,199,200)</p> <p>Steps towards prevention ( Page No: 209,210)</p>	<p>Story of kolleru lake (P.No.201 to 205)</p> <p>Seasonal Bioaccumulation of heavy metals in fish (P.No.205 to 207)</p> <p>Sparrow campaign (P.No. 207 to 209)</p> <p>Human evolution (P.No.188)</p>
10	<i>Natural resources</i>	<p>Introduction ( Page No: 212)</p> <p>Activity – 1 Natural resources around us ( Page No: 221,222)</p> <p>Conservation – A vital concern ( Page No: 227,228)</p> <p>Conservation groups ( Page No: 228)</p>	<p>Case I (P.No. 212 to 217)</p> <p>Water for all (P.No. 217)</p> <p>Case II (P.No. 217 to 220)</p> <p>Source of irrigation water in Andhra Pradesh (P.No.220 &amp; 221)</p> <p>Forest, Soil, Biodiversity, Fossil fuels, Minerals, Activity- 3 (P.No. 223 to 226)</p>

11	<i>Environmental Education</i>	<p>Global warming ( Page No: 1,2)</p> <p>Estimation of particulate pollutants in air ( Page No: 5,6)</p> <p>Vaccination ( Page No: 7,8,9)</p> <p>Mosquitoes woes ( Page No: 9,10)</p> <p>Fossil fuels is not forever ( Page No: 11,12,13)</p> <p>Use solar energy ( Page No: 16,17)</p> <p>conservation of natural resources ( Page No: 22,23)</p> <p>Optimumuse of ground water ( Page No: 24,25)</p> <p>Impact of low cost imports ( Page No: 26,27)</p> <p>Do we need zoos ( Page No: 32,33)</p> <p>House hold wastes ( Page No: 36,37)</p> <p>Water bodies in the neighbourhood ( Page No: 40,41)</p> <p>Disaster management ( Page No: 46,47)</p> <p>Depletion and degradation of natural resources ( Page No: 52,53)</p> <p>Water harvesting ( Page No: 54,55)</p> <p>Flourosis ( Page No: 56)</p> <p>Nature is a sacred place ( Page No: 58,59)</p>	<p>Saviors of our environoment (P.No.3 &amp; 4)</p> <p>Changes in the surrounding and their effect (P.No. 14 &amp; 15)</p> <p>Pollination - an intraction of plants and insects (P.No.18 &amp; 19)</p> <p>Observing the 3R's (P.No.20 &amp; 21)</p> <p>Emploment in semi-rural areas (P.No.28 &amp; 29)</p> <p>Lots of water and yet no water (P.No. 30 &amp; 31)</p> <p>Landscape, culture, people and their relationships (P.No.34 &amp; 35)</p> <p>The pligt of ragpickers (P.No.38 &amp; 39)</p> <p>Impact assessment of developmental projects (P.No.42 &amp; 43)</p>
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