

Subject	Biology	Syllabus Till 31 May	
(Chapter 01,02,04 05, 06,)			
Unit/ Question Title	Topic	Availability of Learning Resource	
		Video Tutorial Link	Reading Material Reference
Chapter#5	Cell Cycle	https://youtu.be/q3a2-0EuKDk	Text book page
	Metaphase, Anaphase, Telophase	https://youtu.be/Vdj6N3DQwjs	Text book page
	More on Mitosis, Cytokinesis	https://youtu.be/pQbn_fORWcQ	Text book page
	Meiosis	https://youtu.be/ichCT1AHX24	Text book page
	Meiosis-1 , Prophase1	https://youtu.be/ie7ImQzMinY	Text book page
	Metaphase1- Telophase 1	https://youtu.be/BOZhmIP9nOE	Text book page
	Meiosis-ii	https://youtu.be/2Y2n57dbaTo	Text book page
	Significance of Meiosis	https://youtu.be/QkBypj4rVJM	Text book page
	Apoptosis and Necrosis	https://youtu.be/zVELdOrbLk8	Text book page
	Significance of Mitosis	https://youtu.be/pwOmM73Z1Xo	Text book page
Chapter#6			
	Basic definitions	https://youtu.be/BmozPcIPecU	Text book page
	Factors affecting Enzymes	https://youtu.be/iN9GB8qQYmI	Text book page
	Characteristics of Enzymes	https://youtu.be/pmoAkf7uoiQ	Text book page
	Lock and key model	https://youtu.be/Dr1OAG8-lsc	Text book page
	Induced Fit Model	https://youtu.be/5J0IfmyFgNs	Text book page
	Specificity of Enzymes	https://youtu.be/-ZRDgBfetGw	Text book page
Chapter#1	Introduction to Biology	https://youtu.be/p7fcW1BLo_A	Text book page 2
	Zoology, Botany, Microbiology	https://youtu.be/Cdz8Mv_mBcs	Text book page 3
	Morphology,	https://youtu.be/15-HkUOJoPw	Text book page 3

	Anatomy, Physiology		
	Histology ,Cell Biology	https://youtu.be/ATp9wTEKMfw	Text book page 3
	Genetics and Embryology	https://youtu.be/PBenJlxtNNI	Text book page 4
	Taxonomy ,Palaeontology	https://youtu.be/AsqtAAD81c	Text book page 4
	Socio-Biology, Parasitology	https://youtu.be/i_E_pjOdpdc	Text book page 4
	Biotechnology , Immunology	https://youtu.be/dbF6fxiZ7Lw	Text book page 4
	Entomology, Pharmacology	https://youtu.be/v_ITyhSlmcY	Text book page 4
	Careers in Biology , Medicine, Surgery, Fisheries	https://youtu.be/NjJxjBjNxj8	Text book page 6
	Carriers in Biology, Animal husbandry, Agriculture, Farming	https://youtu.be/cUGHi59T7T4	
	Forestry , Biotechnology	https://youtu.be/VfX32JQMur8	Text book page 8
	Biology and other Sciences	https://youtu.be/klq3onYx-k0	
	Biology and other Sciences	https://youtu.be/rDUopzVoKQk	
	Quran and Biology, Muslim Scientist	https://youtu.be/-9bUIPzvWLw	Text book page 8,9
	Subatomic and atomic level , Molecular level	https://youtu.be/gN2eGNeXOvs	Text book page 10,11
	Organelles cell and Tissue level	https://youtu.be/QxnPp11AbhQ	Text book page 11
Unit/ Question Title	Topic	Availability of Learning Resource	
		Video Tutorial Link	Reading Material Reference
Chapter #1 Introductio n to Biology	Organ and organ system level	https://youtu.be/0L085ycaKml	Text book
	Individual level and population level	https://youtu.be/_gGJ3iQ1ImI	Text book
	Cellular organisation	https://youtu.be/DVVVL1H71fE	Text book
	Mustard plant , Frog	https://youtu.be/u-mTDAPPcwc	Text book

Subject		Syllabus Till	
Syllabus: Ch: 2			
Unit/ Question Title	Topic	Availability of Learning Resource	
		Video Tutorial Link	Reading Material Reference
2 (2.1)	Biological method	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-2.1&v=b-intro-29a	Biology book,Punjab text book board Page 20-23
		https://sabaq.pk/video-page.php?sid=punjab-biology-9th-2.1&v=b-intro-29b	
	Study of malaria	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-2.1&v=b-intro-31	Biology book,Punjab text book board Page23-26
		https://sabaq.pk/video-page.php?sid=punjab-biology-9th-2.1&v=b-intro-31b	
2	Theory,law and principle	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-2.1&v=b-intro-30	Biology book,Punjab text book board Page 26-27
	Data organization and data analysis	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-2.2&v=b-plan-ana-34	Biology book,Punjab text book board Page 27-28
	Mathematics: as an integral part of scientific process	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-2.3&v=b-plan-ana-35	Biology book,Punjab text book board Page 28

Unit/ Question Title	Topic	Availability of Learning Resource	
		Video Tutorial Link	Reading Material Reference
4 (4.1)	Microscopy and the emergence of cell theory Light microscope	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.1&v=b-the-cell-20	Biology book punjab text book board page 52-53
	(4.1.1)	Electron microscope	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.1&v=b-the-cell-

		<u>21</u>	
	History of the formulation of cell theory	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.1&v=b-the-cell-7	Biology book punjab text book board page55-56
	Subcellular or a- cellular particles	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.1&v=b-var-life-12	
(4.1.2)	Cell structures and functions Cell wall	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.2&v=b-the-cell-23	Biology book punjab text book board page 57
	Cell membrane	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.2&v=b-the-cell-25	Biology book punjab text book board page 57-59
(4.2.1)			
(4.2.2)	Cytoplasm	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.2&v=b-the-cell-28	Biology book punjab text book board page 59
	Cytoskeleton	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.2&v=b-the-cell-28	Biology book punjab text book board page 60
	Cell organelles (nucleus)	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.2&v=b-the-cell-43	Biology book punjab text book board page60
	mitochondria	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.2&v=b-the-cell-38	Biology book punjab text book board page61
	plastids	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.2&v=b-the-cell-40	Biology book punjab text book board page62, 63
	ER,Ribosomes	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.2&v=b-the-cell-30	Biology book punjab text book board page64
	Golgi apparatus,lysosomes	https://sabaq.pk/video-page.php?sid=punjab-	Biology book punjab text book board page64

		biology-9th-4.2&v=b-the-cell-32	
	vacuoles	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.2&v=b-the-cell-34	Biology book punjab text book board page65
	centrioles	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.2&v=b-the-cell-46	Biology book punjab text book board page65
	Difference between prokaryotic and eukaryotic cells	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.2&v=b-the-cell-54	Biology book punjab text book board page 66
4.2.6	Relationship between cell function and cell structure	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.2&v=b-the-cell-50	Biology book punjab text book board page 67
4.2.7	Passage of molecules into and out of cells Diffusion and facilitated diffusion	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.3&v=b-transport-17	Biology book punjab text book board page 69
	osmosis	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.3&v=b-transport-20	Biology book punjab text book board page70
4.3	Water balance problems	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.3&v=b-transport-22	
	Osmosis and guard cells	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.3&v=b-transport-26	
	Application of knowledge about semi permeable membrane	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.3&v=b-transport-16	
	Filtration and active transport	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.3&v=b-transport-29	
	Endocytosis and exocytosis	https://sabaq.pk/video-page.php?sid=punjab-	

		biology-9th-4.3&v=b-transport-32	
	Animal and plant tissues	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.4&v=b-the-cell-61	
	Epithelial tissues	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.4&v=b-the-cell-66	
	Connective and nervous tissue	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.4&v=b-the-cell-67	
4.4	Muscle tissue	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.4&v=b-the-cell-68	Biology book punjab text book board page76
	Plant tissue, simple and compound tissue	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.4&v=b-the-cell-62	Biology book punjab text book board page78
	Meristematic tissue	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.4&v=b-the-cell-63	Biology book punjab text book board page 78
	Permanent tissue	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.4&v=b-the-cell-64a	Biology book punjab text book board page79-80
	Simple Tissues	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.4&v=b-the-cell-64b	Biology book punjab text book board page79-80
	Compound tissue	https://sabaq.pk/video-page.php?sid=punjab-biology-9th-4.4&v=b-the-cell-65	Biology book punjab text book board page81-82