LATEST EDITION



SPSC | IBA | NTS

HST SST

HIGH SCHOOL TEACHER | SECONDARY SCHOOL TEACHER

TEST GUIDE

Includes:

- According to SPSC Syllabus
- Questions from Text Books
- Covering All Subjects
- . To The Point Study Material
- Original Solved Past papers

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BIOLOGY

INTRODUCTION TO BIOLOGY

	A. Encircle the best suitable answ	vers.		
	 The person who analyzes the h 	eart of	the animal by dissecting the animal is o	alleg
	A. Cell biologist			
	B. Histologist			
	C. Microbiologist			
	D. None of the above		lt.	
2	 The book Al-Qanun-fil-Tibb is w 	ritten b	ry:	
	A. Bu Ali sina	В.	Jabir Bin Hayyan	
	C. Abdul Malik Aasmai D.	Ibn N	Nafees .	
3.	Which of the following is not a r	multicel	Ilular organism?	
	A. Frog	В.	Volvox	
	C. mushroom	D.	Chlamydomonas	
4.	Mushroom's belong to Kingdom			
	A. Plantae B. Fungi			
	C. Animalia D. Protista			
5.	Human heart is a/an		*	
	A. Organ B. Tissue			
	C. Organism D. Organelle			
6.	Which of the following is not a m	300000	sleed-3	
	A. Glucose B. Sucrose	acionic	Diecule?	
	C. Fatty acid D. Protein			
7.	The number of plants in desert as		e this could be the statement of:	
	A. Palaeontologist	e scarc	e this could be the statement of	
	B. Social biologist			
	C. Biogeographic			
	D. Taxonomist		Ŷ.	
3.	Most of the amarian	*3		
	Most of the organism's body is con A. Hydrogen B. Carbon	mposed	d of	
	C Onnes		TOTE	
	Volvox is D. nitrogen		94	*:
	A Unicellar			
	C. Bi-cellular B. Multicellular		or i	
	C. Bi-cellular D. Coloniai	141		

7.

9.

SOLVING A BIOLOGICAL PROBLEMS

- A Encircle the best suitable answers.
- The biological method starts with
 - A. Hypothesis B. Experiment
 - C. Observation D. Deduction
- 2. How can you determine that the plasmodium has destroyed the RBC?
 - A. Examine the blood of a single healthy person
 - B. Examine the blood of a single infected person
 - C. Allow mosquito to bite a healthy person and examine his blood
 - D. Examine the blood of some healthy and also some infected person
- 3. The data collected from the experiments can be analyzed by
 - A. Reading the data and drawing conclusions
 - B. Discussion with scientists
 - C. Simple calculations on calculator
 - D. Application of statistical formulae
- 4. How smoke reduces the chance of getting malaria?
 - A. Smoke kills plasmodium in their blood
 - B. Fire increases temperature and plasmodia are killed in air
 - C. Mosquitoes cannot tolerate smoke and are repelled
 - D. Smoke kills Plasmodium present in mosquitoes
- 5. Which of the following does not explain hypothesis?
 - A. It must be consistent with all available data
 - B. It must be testable
 - C. It must be correct
 - D. Must make deductions
- Deductions are derived from
 - A. Observations
 - B. Hypothesis
 - C. Experiment result
 - D. Solution of biological problem
- The statement of hypothesis is
 - A. Logical
 - B. Possible answer
 - C. based upon observations
 - D. All of them

A. Observations B. Hypothesis C. Data D. Conclusion 9. Plasmodium is transmitted to humans through A. Anopheles B. Culex C. Aedes D. All of these	explains the actual solution to the problem.									
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A. Protista B. Monera C. Fungi D. None of them	7.									
Holle Of them										
Holle Of them	***									
Holle Of them										
5. The five-kingdom system of classes										
a system of classic										
A. Robart Maria										
B. Margulis and a serior was proposed by:										
B. Margulis and Schwartz C. Carolus Linneaus										
and Linneaus										

	D.	Aristotle							
6.	Classification system of organisms introduced by Aristotle was based on								
	A.	Habitats	В.	Cell structure					
	C.	Morphology	D.	Anatomy					
7.	,,	kingdo	m in	cludes simplest organisms.					
•	A.	Fungi	B.	Monera					
	C.	Protista	D.	Plantae					
8.	Но	w would you	expla	ain binomial nomenclature?					
.70	A.	A. Classifying organisms on seven levels							
	B.			leveloped by Aristotle					
•	C.			s based on their habitat .					
	D.	Naming syst	em i	n which each organism is given a two-part name					
9.	The	e correct form	at o	f scientific name is					
	A.	Canis lupus	В.	Saccharum					
	C.	Giant's gaze	lle	3 * 0					
	D.	Escherichia	coli						
10.	Or	ganisms that l	have	cell wall but lack chlorophyll are					
	A.	Protista	В.	Fungi					
	c.	Plantae	D.	Animalia					
11.	Ag	group of genu	s for	ms:					
*	A.	Genus	В.	Species .					
	C.	Family	D.	Order '					
12.		habi	tat s	hows maximum biodiversity					
A THEORY	A.	Forests	В.						
	C.	Deserts	D.	Mountains					
		400		#F:					

CELLS AND TISSUES

- Encircle the best suitable answers.
- Cell theory, proposed by Schleiden and Schwann, was based on 1.
 - A. Their observation
 - B. Observations of Hooke and Brown
 - C. All observations on the cell
 - D. Observation made on the nucleus of the cell
- Energy is provided to the cell by: 2.
 - A. Golgi apparatus
 - B. Ribosome
 - C. Mitochondria
 - D. Nucleus
- 2D images can be obtained through: 3.
 - A. Light microscope and SEM
 - B. SEM and TEM
 - C. Light Microscope and TEM
 - D. Light microscope
- The granular material residing inside the nucleus is called:
 - A. Cytoplasm B. Protoplasm
 - C. Nucleoplasm D. Cell sap
- 5. Protein synthesis is carried out in
 - A. Ribosome B. Vacuole
 - C. Golgi apparatus
 - D. Plastids
- Which of the following is the characteristic of nervous tissue: 6.
 - A. Contract and relax
 - B. Transmit the impulses
 - C. Prepare secretion
 - D. Provide energy
- Tissues that make new cells in plants: 7.
 - A. Meristematic tissue
 - B. Collenchyma tissue
 - C. Epidermal tissue
 - D. Ground tissue

8.	transport involves the
	lower to higher concentration: A. Diffusion
	A. Diffusion
	B. Active transport
	C. Facilitated transport
	D. Osmosis
9.	Which of the following anti-
	Which of the following cells have cytoplasm as well as the cell wall? A. Muscle cell B. Red blood cell
	A. Muscle cell B. Red blood cell C. Root hair cell D. Xylem vessel
	. Noot half cell D. Xylem vessel
10.	Composition of cell membrane is:
	A. Cellulose only
	B. Proteins only .
	C. Lipids only
1.0	D. Lipids and proteins
11.	Which of the following account
	Which of the following organisms have cell wall in their cells? A. Fungi only B. Plants only
	o - my or rights only
	C. Plants and prokaryotes only D. All of the above
	o. All of the above
12.	Which of the following organelles have a double membrane?
	A. Ribosomes B. Vacuoles
	C. Centrioles D. Mitochondria
	CELL CYCLE
A.	Encircle the best suitable answers.
	chemete the best suitable answers.
1.	Which of the following statements does not describe meiosis?
	A. There is no DNA synthesis between the divisions
	B. The result is four cells with haploid number of chromosomes
	C. Melosis does not contribute to the genetic diversity in populations
	D. Fusion of two products of meiosis produces a zygote
200	- The products of melasis products a 1/8010
2.	The number of chromosomes in egg cells is if 2n= 8 for any cell in the body.
	A. 12 B. 10
	C. 8 D. 4
3. ,	Chromosomes have lowest amount of DNA in:
	A. Prophase-I B. Prophase-II
	C. Telophase-II D. Telophase-II
32 6	

227	Which of the following statements is correct? A. Meiosis produces 4 haploid cells while mitosis produces 2 haploid cells A. Meiosis produces 4 haploid cells while mitosis produces 2 haploid cells
4.	Malosis produces 4 haploid cells white mitosis produces 2 haploid cells
	a Maioris produces 4 diploid comes, while initiosis reduces it
**	B. Melosis produces viving of chromosomes, which of a tetrad but not in proph
	- Land Lof mitosis results in the
	meiosis-l
5.	Crossing over occurs in:
	A. Prophase-I B. Metaphase-I
	C. Metaphase-II D. Anaphase-I
6.	Which of the following events is not the part of mitosis but takes place in meiosis?
•	A. The Chromatids of each chromosome are separated.
	B. Synapsis and crossing-over occurs.
1	C. The nuclear envelope breaks down.
98	c. The nacion envelope area.
7	Which of the following organs produce cells through meiosis?
7.	
	A. Testes B. Lungs
	C. Heart D. Stomach
•	
8.	has two sister chromatids.
	A. Chromosome B. Centromere
	C. Multichromatid ·
	D. Homologous pair
9.	The cell divides during regeneration through:
- 1	A. Only 1st meiotic division
	B. Both meiotic divisions
0.70	C. Mitosis
	D. All of them
	and the same of th
10.	Homologous change
	Homologous chromosomes:
	The facilities
	B. Pair-up during meiosis
	D. All partner of homologous pair
	C. One partner of homologous pair move to each daughter cell D. All of them
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ENZYMES

Α.	Encir	cle the best sultable	answe	rs.							
1.	Enz	ymes are:									
•	a.	Carbohydrates -	b.	Fats							
	c.	Proteins	d.	Starch							
2.	Whi	ch of the following co	rrectly e	xplains t	he function of enzymes?						
	a.										
	b.	Are used up during chemical reactions.									
	C.	Alter the direction									
	d.	Alter the rate of c									
3.	Whi	Which of the following describe the enzyme?									
	 All parts of enzyme molecule take part in reaction 										
	ь.	Enzymes lower th	e activa	tion ene	rgy of reaction						
	C.	An enzyme can ac		1.							
	d.	They are needed i	n large o	quantitie	5						
4.	Whi	ch of the following de	escribe t	he cofac	tors?						
	a.	Take part in reacti	ions	b.	Help enzymes in their activity						
	c.	Increase activation	n energy	y d.	Are composed of proteins						
5.	The coenzymes are:										
	a)	Proteins		b)	Carbohydrates						
	c)	Vitamins		d)	DNA						
6.	How does the change in temperature beyond the optimum temperature										
	affect the enzyme or reaction?										
	a.	Increase the rate	of reacti	ion b.	Decrease the rate of reaction						
	C.	Not affect the rate			Denature the enzyme						
7.		H at which the enzy			ks best is:						
•••	a.	alkaline pH	b.		lic pH						
	Dec No.	neutral pH	-		es not affect its activity						
0	C.	neutral pri	anviron	mental	changes, which ultimately affects:						
8.				Doeni	ration						
	a.	Metabolism	ь.		ration						
2	C.	Digestion	d.		them						
9.	The h	igh temperature of	body is	dangero	ous because:						
	a.	Nerves breakdow	n		7.47						
	b.	Boiling of body wa			70						
	c.	Enzymes stop to			*						
		None of them									

BIO-ENERGETICS

A.	Encircl	e the best suitable answ	vers.							
1.	Da	ork reaction occurs in:								
	a.	Mitochondria								
	b.	Ribosome								
	c.	Granum of chloroplast								
	d.	Stroma of chloropi	ast		S 92	5 E 12				
2.	_	trap light energy	and ma	ake use	of it to produce carl	oohydrate.				
	a.	Plants								
	Ь.	Algae								
	c.	Photosynthetic org	anisms	d.	Fungi					
3.	Site	e of photosynthesis is:								
	a.	Mesophyll cells		b.	Guard cells					
	c.	Phloem cells		d.	All of the above					
4.	-	controls photosyr	thesis b	y actin	g as a limiting factor	for enzymes.				
	a.	CO₂ concentration	Ь.	Tem	perature	and the contract of the contract of				
	c.	Light intensity	d.	Pigm	ents					
5.	The colors that are important for photosynthesis are:									
	a.	Green and yellow	b.	Yello	w and orange					
_	c.	Green and orange	d.	Red a	and blue	4				
6.	Whi	Which of the following substances can never be used for respiration?								
	a.	Oxygen	b.	Food	molecule					
2	C.	Enzymes	d.	CO						
7.	The	The central substance in the ATP structure to which three phoses have								
	are a				ance pilo	shuare Bronbs				
	a.	Ribose	b.	Gluco	se					
	c.	Adenine	d.	H-O						
8.	acts as fuel used by the living cells to carry out functions:									
	a.	Electric power	b.	Gene	rator	5:				
_	, c.	ATP	4							
9.	Site	of glycolysis in bacterial	cell is:	ileat !	energy					
	a.,	Mesosome	b.	04	de .					
	C.	Mitochondria		Cytop						
10.	Whic	h molecules are used u	n durina	Nucle	oid .					
	acid i	h molecules are used u s converted to ethanol	e anime	the ar	laerobic respiration	when pyruvic				
	a.	one NADH ₂	b			15.640.62				
	c.	two NADH ₂	d.	one N	ADH ₂ and CO ₂	200				
			u.	only C						

NUTRITION

1.	Deficie	ency of	results i	n chloros	is in pla	nts.	
- .	a.	Iron	b.	Oxygen			
	c.	Nitrogen		d.	Calclum	1	
2.	All of	these are mid	cronutrie	nts in plar	nts exce	ept:	
	a.	Hydrogen		b.	Iron		
100	c.	Chlorine			Copper	E.	
3.	Plants	use					
	a.	Carbon dio	xide	b.	Oxyger		
	c.	Nitrates		d.	Vitami	ns	
4.	What	happens to	the food	in the sto	machi		
	a.	No digestion	on occurs	in the sto	omach.	II latesting	
	b.	The food n	noves qu	ickly into	the sma	all intestine.	
	c.	Juices mix	with the	food and	stoma	ch muscles squeeze it.	culator
	d.	The food i	s comple	tely diges	tea ano	is absorbed into the cir	
		system.		to to	ilcor		
5.		_ does not p	roduce d	igestive ju	Stoma	ach	
	a.	Esophagu		b.	intest		
	c.	Pancreas		d.	ace in la	arge intestine:	
6.	The a	absorption o	f		Vitam	nins	
	a.	Water		b. d.		these	
	C:	Salts		a.	A		
7.	Saliv	a does not:		otoins	b.	Help in the lubrication	n
	a.	Start dige	estion of	proteins		Make taste possible	
	c.	Secrete s	aliva		is calle	ed the cardiac sphincter	•
8.	The	valve betwe	en	donum	- 150 200 100		
	a.	Stomach	and duo	-mach			
	ь.	Esophagi	us and st	Omach		*	
	c.	Duodenu	ım and ile	eum		,	6:
	d.	Jejunum	and caec	um			
9.	Live	r is involved	in:	-b obvdra	tes, lipi	ds, and proteins	
	a.	Metabol	ism of ca	roonyura	hlood c	ds, and proteins ells.	
	b.	- 1.1-0	arn of me	Itule ica		ti i	
	c.	Detoxific	cation of	the chem	il Co.	6	8
Ç. 1	d.	All of th	e above	disaction	of:	- E	
10.	Per	osin is involve	ed in the	digestion b.	Pro	teins	*
	a.	Carbohy	drates	d.	Vita	amins .	
	с.	Fats		u.	6.15		
3.0							

TRANSPORT

	Encl	cle the best suitable a	nswers						
	Plate	elets forming cells are c	alled:						
	a.	Erythrocytes	b	Leucocytes					
	c.	Bone marrow cells	d.	All of these					
	Bloo	d group O can be trans		0:					
	a.	Α .	ь.	В					
	c.	AB	d.	All of the these					
	_	chamber of humar	heart						
9	a.	Right atrium	b	Left atrium					
	c. .	Left ventricle	d.	Right ventricle					
	The			ues is carried out through:					
	a.	Arteries	Ь.	Veins					
	c.	Capillaries	· d.	Arteries and veins					
	All o	f the following veins car	rry deo	xygenated blood except:					
	a.	Vena cava	ь.	Hepatic portal					
	c.	Pulmonary	d.	Renal					
	Whi	Which cells of blood are responsible for clotting?							
	a.	Platelets	b.	Erythrocytes .					
	C.	Neutrophils	d.	Raconhile					
	A pa	tient with blood group ,	A can b	e given the blood of group;					
	a.	A or AB	b.	A or O					
	c.	A only	d.	001					
	The	blockage of blood flow i	n	results in Myocardial infarction.					
	, a.	Aorta	b.	Pulmonary artery					
	c.	Coronary artery	d.	Hepatic artery					

HOMEOSTASIS

A Se	lect the	correct answer.										
1.	The r	maintenance of the internal envi	ronment	of the organism is seeded								
	throu	-0		or the organism is carried out								
	a.	Fluids regulation	b.	Excretion of wastes								
	c.	Temperature regulationd.	All of	the above								
2.	Xero	Xerophytes adapt themselves to survive in severe conditions by developing these conditions except										
	a. Th	ick cuticle	ь.	Large number of stomata								
	c. Su	nken stomata	d.	Deep root system								
3.	The v	The water is lost from the plants in the form of small droplets from small pores is called										
	a.	Stomatal transpiration b.	Cutic	ular transpiration								
	C.	Lenticular transpiration		ation								
4.	Waste fluid leaves the nephron to enter											
	a.	Collecting tubules	b.	Ureter								
	c.	Convoluted tubules	d	Medulla								
5.	Urine travels from kidney to urinary bladder through											
	· a.	Ureter	ь.	Urethra								
	c.	Renal tubule	d.	Nephron								
6.	Kidney produces waste material consisting of											
	a. ·	Water, proteins, and salts	b.	Saits, water, and vitalinis								
	•	Urea and water d.		, water, and salts								
7.	Skin	produces sweat which makes it	а .	Desetting organ								
	a.	Respiratory organ	D.	Breathing organ								
	c.	Excretory organ d.	Dige	estive organ								
8.	Func	a trade de la companya de la company										
	Lady cool and to felliove excess pro-											
	A A A A A A A A A A A A A A A A A A A											
	c. Filter the blood and to remove to cool the body d. Remove waste products and to cool the body The filtrate that enters the Bowman's capsule does NOT contain: b. Calcium ions											
9.	The f	Hente that enters the Bowman	n's capsu	le does NOT contains								
٥.		b.	Calc									
	a.	Water	d.	Urea								
10	C.	Blood cells	from:									
10.	Liver	is involved in urea production	b.	Ammonia								
	a.	Uric acid	d.	Amino acids								
	C.	Carbon dioxide	270.00									

COORDINATION AND CONTROL

A.		t the correct answ					9			
1.	Insuli	n is a hormone an	d is sec	12.5	254.2		40			
	a.	Liver		ь.	Pancre	as				
	C.	Stomach		d.	Kidney					
3.		carries signals	towar	ds the ne	euron cel	l body.	9 0			
	a.	Axon		b.	Dendri	te				
	C.	Schwann cell	d.	Myeli	n sheath		-			
4.		detects the cha								
	a.	Receptors		b.	Neuro					
	c.	Effectors		d.	All of t					
5.	Cere	beral cortex:		-	A. 01 C	ile.iii	50			
	a.	Is located deep	in the	brain						
	b.	Is the folded o			f the hra	in.				
	c.	Is located at th	e back	of the h	rain					
	d.									
6.	d. Is part of the peripheral nervous system. The condition in which the light rays are focused behind the retina is called:									
	a.	Myopia	b.	Hyne	rmetropia	a benina the re	tina is call	ed:		
	c.	Short sightedn		d.						
7.	Neuron endings have microscopic gaps called:									
3000	a.	Transmitters		b.			71.00			
	c.	Pores		d.	Synapses .					
8.		is the biggest p	part of		Nodes					
	а.	Cerebrum		b.	Cerebe					
	c.	Amygdala		d.	Fronta					
9.		lligence is controll		* *						
	a.	Cerebrum			b.					
	c.	Thalamus	•		d.	Cerebellum	• • •			
10.	Соп	nposition of mixed	nerves	:	u.	Hypothalamus	À			
	a.									
	b.	Cell bodies of sensory and motor neurons								
	c.	Axons of inter	-neuro	ns	tor neuro	ons				
	d.	Cell bodies of	inter-n	eurons						
11.	Me	mory is controlled	by:					S. Chip.		
	a.	Cerebellum			b.	llmh.		1-18e-5		
	c.	Hippocampus	d.	Нуро	thalamus	Limbic system		il de la		
12.	Wh	ich of the following	g is bot	h endocr	ine and e	KOCTION at	- 1	ALESON III		
	a.				b. '	Thyroid				
	C.	Adrenal	grango son a es	_ d.	Pancre			Part Tool		
13.	Pre	ssure waves are pr	oduced	through	the vibra	tion in	- 1	观上		
	a.	Cochlea		b.	Both 'a	and 'b'	part of inn	or see		

SUPPORT AND MOVEMENT

A.		the correct answer.				
1.	Apper	ndicular skeleton cons	sists of			
4.	a.	Pelvic girdle	b	Limbs		
	c.	Pectoral girdle	d.	All of	the above	
2.	Verte	brae are connected t	hrough .		AND	
	a.	Fixed joint		b.	Slightly moveable joi	nt
	c.	Ball-and-socket joi	nt	d	Hinge joint	
3.	Axial	skeleton does not inc	lude			
٥.	a.	Sternum		b.	Vertebrae	92
	c.	Leg bones		d.	Skull	
4.	Bone	s have which m	ake them s	tronger	than the cartilage	
	a.	Collagen fibres	b.		ocytes	
	c.	Calcium phosphat	te	d.	Lacunae	
5.		is the protein of		atrix.	NO THE RESERVE OF THE PARTY.	
٥.	a.	Collagen		b.	Osteo-nectin	
	•	Keratin	d.	Actir	1	
6.	Two	bones at a joint are o	onnected t	hrough	305	
U.	a.	Ligament		D.	Teṇdon	7
18	c.	Cartilage		· d.	Marrow	
7.	Bone	es become weak and	brittle in _			
7.	a.	Osteoporosis		b.	Osteoarthritis	
			ritis	d.	Vertebral column	
	c.	is the snot when	e the muse	le gets a	attached to the bone.	
8.		Tendon	. Liga	ment		
	-a.	Insertion	· d.	· Ori	gin	
	c.	is inflammation i	n ioints.		19 3	
9.		is inflamination i	o. Ost	teoporos	sis	
	a.	Artimitis	All of the a	bove		
	C.	Rickets d.	All OI the s	100	*:	

REPRODUCTION

A.	Selec	t the correct answer.			
1.	Gene	tic variations are obtained thr	ough	¥	
	a.	Sexual reproduction	b.	Asexual reproduction	
	C.	Mitosis d.	575.5	e number of organisms	
2.	Mode	of reproduction of hydra is:	A Hvdra re	produces associably by:	
	a.	Spore formation	b.	Multiple fission	
	c.	Budding	d.		
3.	Artifi	cial vegetative propagation of	nlante ie e	Binary fission	
	a.	Grafting	Plants is C	arried out through	
	c.	Budding	b.	Spore formation	
4.	Parth	nenogenesis gives rise to a nev	d.	Binary fission	
	a.	Sperm			
	c.	Unfertilized egg	b.	Fertilized egg	
5.	The e	embryo sac is present in the _	d.	Common body cell	
	a.	Anther		rt of a flower.	
	c.	Ovule	Ь.	Filament	
6.		and female games	d.	Style	
	a.	and female gametes unite to	undergo_		
	•	Sparmatogga	. b.	Oogenesis	ė
7.	The	single cell which gives	d	Gametogenesis	
	calle	q.	ın individu:	Gametogenesis al after series of mitotic divisions	
	a.	Egg			is
	с.	- 21754 barre	b.	Sperm	
8.		Zygote	d.	Blood cell	
1000	а.	results in diploid number Ovulation	of chromo	Somes .	
	c.	Fortilization	b.	Oppende	
9.		ch of the following at	Sper	matogenesis	
-200	а.	ch of the following shows exte	rnal fertiliz	ration?	
628	c.	Fish and amphibians Birds	b.	Reptiles	
10.	Whi	ch of the following shares	d.	Mammals	
	а.	ch of the following shows inte	rnal fertiliz	ation?	3
		. 1311			

Aquatic animals

C.

Amphibians

Mammals

INHERITANCE

Sele	ect the correct answer.							
-17	_ are small segments of							
а.	Genes b.	Nucle	eic acids					
c.	Chromosomes		d. All	of the abov	/e			
_	is the different for Centromere	ms of ger	ne responsible	for the sam	ne trait.			
а.	Trait	. D.	Character					
C.	ural selection alters:	d.	Allele					
	Individuals		12 3714					
a. c.	Races	b.	Populatio	ns		*		
		d.	Phyla	86 4		5		
a.	A plant has genotype RrSs. How many different gametes would be produced? a. Three b. Four							
c.	Six	b.	Four	19				
		d.	Eight		20			
100	Speciation results in:							
b.	a. A new gene pool is formed b. Evolutionary path of a species converge							
	Hybrid species is f		es converge					
c. d.	Shows differences		al traite					
	notype expresses:	iii piiysica		25				
a.	Genetic makeup	h P	hysical makeu	in				
	Chemical composit		nysical make		•			
c. d.	Metabolism							
u.	is histone plus D	NΔ	9	*				
_	Centromere	b.	Chiasma					
а.	Nucleosome	d.	Chromat		12 E			
c.	is an allele which s				gous.			
_		b.	Recessiv	e				
a.	Dominant		omplete dom					
C.	Co-dominant d.		ompiete eem	*	* '			
	central dogma consist		7.1					
a.	DNA + RNA = Prote							
∙b.								
C.	$ONA \rightarrow RNA \rightarrow Pro$				•			
d.	Protein → RNA > I	DNA	.: -f hom	NOTUROUS FR	cessive individu	ual?		
Wh	What would be the genotype of parents of homozygous recessive mattered							
a.	Homozygous dom	inant						
b.	Homozygous rece	essive	3					
C.	Heterozygous			(90)	*			
d.	Both 'b' and 'c'				· ·			

MAN AND HIS ENVIRONMENT

A.	Select	the correct answer.							
1.	The d	irection of energy flow t	hrough	an ecosystem is:					
7500	a.	Unidirectional	b.	Cyclic					
	C.	Reversible	d.	Multidirectional					
2.	The h	The highest amount of nitrogen is present in:							
-	a.	Ocean	b.	Atmosphere					
	c.	Phage DNA	d.	Fossil fuels					
3.	Overgrazing may produce:								
٥.	a.	Soil erosion	b.	Retention of useful speci	es				
	•	Productive soils d.	All o	f the above					
4.	Rette	r environment can be ac	hleved	through three R's which are:					
7.	a.	Reduce, Reuse, Recyc	:le						
	b.	Read, Register, Recall							
	c.	Random, Reduce, Rec							
	d.	Reduce, Rebuild, Rest							
5.	Composition of food web is:								
э.	a. Interlocking food chains								
	b. Producers, consumers and decomposers								
	c.	A portion of a food ch		RESPONDE GOOD FOR A					
	d.	A set of similar consu							
6. •		Prey-predator relationship contributes to balance::							
0.	a.	Community	b.	Population					
	c.	Ecology d.	Ecos	ystem					
7.		Ecological pyramid represents:							
••	a.	Pyramid of energy	b.	Pyramid of number					
	c.	Pyramid of biomass		전 경기를 통해 가는 사람이 있다. 그런 것이 되었다면 보다 되었다면 하다면 보다 가게 되었다.					
8.		es of nitrogen and Sulphu	ır in the	environment react with wat	er vapors to				
o.	prod	4 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			•				
	a. Acetic and Citric acid								
	100	b. Sulphuric and Nitric acid							
	c.	Hydrochloric and Nitr		•	W				
	d.	Sulphuric and Citric ac		•	-				
9.	Nitro			itrates and nitrites through a	process known				
-	as:								
	a.	Assimilation	ь.	Denitrification					
	c.	Ammonificationd.	Nitri	fication					
10.	Prasi	itism can be observed in		·					
	a.	Aphids and ants							
	b.								
			. 4	Taneworm and host					

MAN AND HIS ENVIRONMENT

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8.		es of nitrogen and Sulphu	ır in the	environment react with wat	er vapors to				
o.	prod	4 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			•				
	a. Acetic and Citric acid								
	100	b. Sulphuric and Nitric acid							
	c.	Hydrochloric and Nitr		•	W				
	d.	Sulphuric and Citric ac		•	-				
9.	Nitro			itrates and nitrites through a	process known				
-	as:								
	a.	Assimilation	ь.	Denitrification					
	c.	Ammonificationd.	Nitri	fication					
10.	Prasi	itism can be observed in		·					
	a.	Aphids and ants							
	b.								
			. 4	Taneworm and host					

BIOTECHNOLOGY

A.	Selec	t the correct answer cut the DNA in speci	fied secur	I	
1.	a.	Ligase	b.	Protease	
	c.	DNAase d.	-	nuclease	
2.				interest to carry to the targe	et cell is called:
4.	a.	Transforming DNA	b.	Carrier DNA	
	c.	Phage DNA	d.	Vector DNA	
3.	Endo	nucleases are enzymes	which ar	[10] 10 20 20 20 20 20 10 10 20 20 20 20 20 20 20 20 20 20 20 20 20	
70	a.	Bacteriophages	ь.	Bacterial cells	
	c.	Plasmids	d.	Blue green algae	
4.	Func	tion of fermenter:			
	· a.	Increasing ferments	ation		
	b.	Production of enzyr		in fermentation	
	c.	Production of micro			
	d.	Making the condition	ons optim	um	
5.	rDNA	is the abbreviation of	:		
	a.	Genetic makeup	b.	Replicative DNA	
	c.	Recombinant DNA	d.	Retro DNA	
6.	Func	tion of interferon is to	:	•	
70	a.	Kill viruses	b.	Improve immunity	
	c.	Work as vaccine	d.	All of the above	
7.		from two different so	urces is ca	alled .	
	a.	Vector DNA	b.	DNA clone	140
	c.	Plasmid DNA	d.	Recombinant DNA	
8	Defe	cted gene is replaced	by health	y gene through a process kn	own as
	a.	Cloning	b.	Gene therapy	
2	c.	Vaccination	d.	Fermentation	
9.	7	acts as a vector.	90		
7.5	a.	Plasmid	b.	Algae	
		Yeast	d.	E. coil	
	C.	Teast	-		

PHARMACOLOGY

Α.	Sel	ect the correct answ	er.		- husialasiasi -	uete t				
1.	_		e which is u	sed to alter the p	onysiological s	ystem in the				
	inte	erest of the person.								
	a.	Medicine	b.	Vaccine	7 00					
	c.	Narcotic	d.	Drug						
2.	The	The drugs taken through oral route reach first after being absorbed in the								
	bloo	od			100					
	a.	Kidneys	b. Lun	DC .						
	c.	Liver	d.	Brain						
	_	stimulates the ar	ntibodies or	oduction which u	ltimataly race	les :- :				
	boo	st.	resourcs bi	·	illinately resu	its in immunit				
	а.	Drug .	b.	Antiblette						
	c.	Analgesic	d.	Antibiotic						
	_	drugs ease agitation	on and mak	Vaccine						
	a.	Painkiller	· b.	e a person sleep.						
•	c.	Sedative		Hallucinogen		•				
	Whi	Which one of the following is a synthetic drug?								
	a.	Morphine	ing is a syntr			3.0				
	c.	Mathed	Ь,	Codeine						
	Whe	n the person loses b	d.	Heroin						
	is kn	en the person loses his own as:	s ability to	control his desire	for drugs +b					
	a.	Addiction			-, 983, ther	this condition				
	c.	Infection	D.	Vaccination						
		h of the following :	d.	Heroin	(***)					
	а.	ch of the following is Sulfonamides	not a class o	of antibiotic?		1				
	c.	Sanonannues	b.	Tetracycline	•					
		Penicillin otics are obtained fro	d.	Morphine						
	a.	Only -land	im:	::::::::::::::::::::::::::::::::::::::	18	F - K 15 (1.5)				
	c.	Opium plant	b.	Cactus plant		4.7				
		Cannabis plant d.	Both			100				
	a.	wide of administration of vaccines is through								
	C.	injections	b.	Mouth		23152				
S 12	Conb.	Nose	· d.		a 8 i	31 770				
	cepna	alosporins are the an	tibiotics whi	ich are produced						
	d.		b.	Bacterium	rom:					
	C.	Plants	d.	Herbs		100				
				* 15 (17 L) ()						
					. 25					