# Entrance Test for M.Sc. Life Science Programme 2011 June, 2011

Name	Enrolment No.
Total No. of Questions : 150	Time : 3 Hours

- All questions are *Compulsory*.
- Use of calculator is *not allowed*. Rough work may be done in the space provided at the back of the Test Booklet.
- Read the instructions given on the OMR Response Sheet carefully before you start.

### How to fill up the information on the OMR Response Sheet

#### (Examination Answer Sheet)

- 1. Write your complete enrolment no. in 9 digits. This should correspond to the enrolment number indicated by you on the OMR Response Sheet. Also write your correct name, address with pin code in the space provided. Put your signature on OMR Response Sheet with date. Ensure that the Invigilator in your examination hall also puts his /her signature with date on the OMR Response Sheet at the space provided.
- 2. On the OMR Response Sheet student's particulars are to be filled in by pen. However use HB pencil for writing the Enrolment No. and Examination Centre Code as well as for blackening the circle bearing your choice of answer number against the serial number of the question.
- 3. Do not make any stray remarks on this sheet.
- 4. Write correct information in numerical digit in Enrolment No. and Examination Centre Code columns. The corresponding circle should be dark enough and should be filled in completely.
- 5. Each question is followed by four probable answers which are numbered 1, 2, 3 and 4. You should select and show only one answer to each question considered by you as the most appropriate or the correct answer. Then by using HB pencil, blacken the circle bearing your choice of answer number against the serial number of the question. (If you find that answer to any question is none of the four alternatives given under the question, you should darken the circle with '0')
- 6. If you wish to change your answer, ERASE completely the already darkened circle by using a good quality eraser and then blacken the circle bearing your revised answer number. If incorrect answer is not erased completely, smudges will be left on the erased circle and the question will be read as having two answers and will be ignored for giving any credit.
- 7. No credit will be given if more than one answer is given for one question. Therefore, you should select the most appropriate answer.

#### **GENERAL INSTRUCTIONS**

- 1. No cell phones, calculators, books, slide-rules, note-books or written notes, etc. will be allowed inside the examination hall.
- 2. You should follow the instructions given by the Centre Superintendent and by the Invigilator at the examination venue. If you violate the instructions, you will be disqualified.
- 3. Any candidate found copying or receiving or giving assistance in the examination will be disqualified.
- 4. The Test Booklet and the OMR Response Sheet (Answer Sheet) would be supplied to you by the Invigilators. After the examination is over, you should hand over the OMR Response Sheet to the Invigilator before leaving the examination hall. Any candidate who does not return the OMR Response Sheet will be disqualified and the University may take further action against him/her.
- 5. All rough work is to be done on the test booklet itself and not on any other paper. Scrap paper is not permitted. For arriving at answers you may work in the margins, make some markings or underline in the test booklet itself.
- 6. The University reserves the right to cancel scores of any candidate who impersonates or uses/adopts other malpractices or uses any unfair means. The examination is conducted under uniform conditions. The University would also follow a procedure to verify the validity of scores of all examinees uniformly. If there is substantial indication that your performance is not genuine, the University may cancel your score.
- 7. In the event of your qualifying the Entrance Test, the hall ticket should be enclosed with your admission form while submitting it to the University for seeking admission in M.Sc. (Life Sciences) Programme along with your testimonials and programme fee. Admission forms received without hall ticket in original will be summarily rejected.

1.	The	most variable pe	riod o	f the cell cyc	cle is :					
	(1)	S-phase	(2)	G 1-phase		(3)	G 2-phase	(4)	G 0-phase	
2.	Whi	ch of the followi	ng do€	es not consti	tute t	he cyt	oskeletal systen	n ?		
	(1)	Microtubules	(2)	Microbodi	es	(3)	Centrioles	(4)	Microfilaments	
3.		mother has blood d group of the pr	_	•	zygou	s and	father has 'A' u	ınknow	n then the possible	Ξ
	(1)	AB and B	(2)	AB and A		(3)	A + B	(4)	Ο	
4.	Estu	aries are conside	red nı	ıtrient traps	of:					
	(1)	Rivers			(2)	Rive	rs and Oceans			
	(3)	Lakes			(4)	Lake	es and Oceans			
5.	Phyt	toplanktons are c	lomina	ant in which	n of th	ne foll	owing freshwat	er zone	es ?	
	(1)	Limnetic zone			(2)	Prof	undal zone			
	(3)	Littoral zone			(4)	Aph	otic zone			
6.	Con	nplete photosynth	etic ap	oparatus of c	chloro	plast :	necessary for ph	otosynt	thesis is coded by :	
	(1)	nuclear gene			(2)	chlo	roplast gene			
	(3)	nuclear and ch	loropl	ast gene	(4)	chlo	roplast and mit	cochond	Irial gene	
7.		of the five major nective tissue of v		_	mole	cules,	which of the fol	llowing	is not found in the	Ε
	(1)	Type - 1	(2)	Type - 2		(3)	Type - 3	(4)	Type - 4	
8.	The rise	-	tic cel	l division in	n a pı	rimary	sex cell in a h	numan	male usually give	٤
	(1)	one diploid cell			(2)	four	monoploid cell	.s		
	(3)	one monoploid	cell		(4)	four	diploid cells			

9.	Dur cells	0 1	stomata	a which ior	ns are	trans	ported from n	eighbou	ring cells to guard	
	(1)	K <sup>+</sup> ion	(2)	Cl⁻ ion		(3)	Na <sup>+</sup> ion	(4)	Ca <sup>++</sup> ions	
	_			,						
10.	Con	centration of u	rine in n	nammals de	epend	s on :				
	(1)	Glomerulus's			(2)	Leng	gth of Henley's	loop		
	(3)	Osmotic press	sure of b	lood	(4)	Size	of organism			
11.		utation change cture of protein			•			on funct	tioning and overall	
	(1)	Silent	(2)	Mis-sense		(3)	Transition	(4)	Frameshift	
			***			. 1	1 1.	. 11	ul c	
12.	Ŭ	of the fossils w		rganic cont				iinea by	the use of :	
	(1)	Radioactive c	arbon		(2)	Serc	ology			
	(3)	Calorimetery			(4)	Chr	omatography			
13.	In m	neiosis crossing	over occ	curs during	:					
	(1)	Prophase - I			(2)	Prop	phase - II			
	(3)	Metaphase			(4)	Ana	phase			
14.	If th	e Km of enzvm	e for su	bstrate A is	1 × 1	10 <sup>-6</sup> a	and for substra	ite B is 4	$\times$ 10 <sup>-8</sup> , it means :	
	(1)	·					an substrate B		·	
	(2)			-			an substrate A			
		•		J						
	(3)	·	-	•	ostrat	e A ai	nd substrate B			
	(4)	Enzyme is no	n - spec	1f1C						
15.	Reso	olving power o	f scannii	ng electron	micro	scope	is:			
	(1)	0.001 nm	(2)	0.01 nm		(3)	0.1 nm	(4)	0.0001 nm	
M.S	c. Lif	e Science/Jun	e 2011		5				P.T.O.	

9.

	(1)	Alzheimer's disease	(2)	Schi	zophrenia		
	(3)	Parkinson's disease	(4)	Reti	noblastoma		
17.	The	definitive evidence in favor of c	ommon	desce	nt for all living be	ings is	s:
	(1)	That they all contain RNA	(2)	The	universality of DN	JA as t	he genetic materia
	(3)	The universality of genetic coo	de (4)	Tha	t they all use carbo	hydra	te as energy source
18.		ne partial nucleotide sequenc esponding mRNA sequence wil		gene i	s 5' - TTGCATT.	ACCO	GGCTAT - 3', the
	(1)	5' - ATAGCCGGTAATGCAA	3'	(2)	5' - AACGUAA	UGG	CCGAUA - 3'
	(3)	5' - AACGTAA'IGGCCGATA	3'	(4)	5' - UUAGCCG	GUA.	AUGCAA - 3'
19.	Whi	ch one of the following is <b>not</b> a	charact	eristic	of a bacterial cell	wall	?
	(1)	It harbors the electron transp	ort chair	า			
	(2)	It defines the size and shape of	of the ba	cteriu	m		
	(3)	It contains modified sugars					
	(4)	Sometimes it contributes to its	s pathog	enic fi	ınction		
20.		en a mouse cell was placed in a s cell, the solution is :	olution,	the ce	ll volume increase	ed. Th	ius, as compared to
	(1)	Hypertonic (2) Isotoni	С	(3)	Hypotonic	(4)	Mesotonic
21.	Whi	ch one of the following stains is	s used to	o detec	et Mycobacterium s	pecies	; ?
	(1)	Acid - fast stain (2) Fuchsin		(3)	Gram stain	(4)	Giemsa stain
						•	
22.	The	post translational modification of	ommon	ly four	nd in the praline re	esidue	s of a protein is:
	(1)	Methylation (2) Acetyl	ation	(3)	Hydroxylation	(4)	Phosphorylation
M.S	c. Lif	e Science/June 2011	6				

. Neurodegeneration leads to all of the following, except :

23.	Duri	ng photosynthesis	s, ligh	t reactions p	produ	ce:	•			
	(1)	GTP	(2)	NADH		(3)	FADH <sub>2</sub>	(4)	NADPH	
24.	Hum	an mitochondria	are :							
	(1)	Generated de no	vo in	the zygote	(2)	Inhe	rited from the f	ather		
	(3)	Inherited from b	oth p	arents	(4)	Inhe	rited from the n	nother		
25.	Whe	n the genome of a	a bact	eriophage is	integ	grated	into a cellular {	genome	, it is called a :	
	(1)	Lytic virus			(2)	Prop	hage			
	(3)	Transducing vir	us		(4)	Micr	ophage			
26.	Wha	t is allele ?								
	(1)	A physical locat	ion oı	n chromosoi	me					
	(2)	Different genes				romos	somes			
	(3)	Alternate form of								
	(4)	Different gene e		· ·	subu	nits o	f a heteromeric	enzvme	9	
	(-)	<u> </u>		8						
27.	Whi	ch one of the follo	wing	is found on	ly in	anima	ıl cells ?			
	(1)	Plastids	(2)	Mitochond	lria	(3)	Golgi apparat	us (4)	Centrioles	
28.	Svna	ptic transmission	is an	example of	whic	h type	e of signaling?			
	(1)	Endocrine	(2)	Paracrine		(3)	Autocrine	(4)	Neurocrine	
29.		Which one of the following is $not$ an immediate event following activation of cell surfactors?								
	(1)	GTP hydrolysis			(2)	Tyrosine phosphorylation				
	(3)	Receptor dimeri	izatio	n	(4)	Acet	ylation of histo	nes		

30.	'Koz	zak' consensus sequence is a chara	cterist	ic of			
	(1)	Gene promoter	(2)	Orig	gin of replication		
	(3)	5' - UTR of eukaryotic mRNA	(4)	3′ -	UTR of eukaryoti	ic mRI	NA
31.	The	evolution of a new species is called	d :				
	(1)	Differentiation (2) Ontogeny		(3)	Organogenesis	(4)	Speciation
32.	Whi relat	ch of the molecular methods for as tedness ?	sessin	g sim	ilarity gives the c	rudes	t approximation of
	(1)	DNA hybridization	(2)	PCF			
	(3)	16S rDNA sequencing	(4)	DN	A - base composi	tion	
33.	Chlo	proplast and mitochondria contain	DNA.	. Thi	s supports the co	ncept	of:
	(1)	Chromosomal mutation	(2)	Cyto	plasmic inherita	nce	
	(3)	Transformation	(4)	Mul	tiple alleles		
34.	Whi	ch of the following is <b>not</b> a micron	utrien	ıt for	plants ?		
	(1)	B (2) Cu		(3)	Zn	(4)	Ca
35.	The	most important event in apoptosis	invol	ves :			
	(1)	Discrete lesions in cell membrane					
	(2)	Loss of cell membrane					
	(3)	Loss of phosphatidylserine from	memb	ranes			
	(4)	DNA fragmentation					
36.	Nati	ıral genetic engineer, is a term used	d for :				
50.	(1)				A	(4)	A '11
	(1)	Agrobacterium (2) Azotobacte	7	(3)	Azospirullum	(4)	Aspergillus
M.Sc	c. Life	Science/June 2011	8				

37.	In B	$\Gamma$ cotton, the activ	e ing	redient that	kills i	nsect	is:		
	(1)	Bacterial toxin	(2)	Alkaloids		(3)	Terpenoids	(4)	Salicylic acid
38.	Phot	osystem I is esser	ntial fo	or the produ	ıction	of:			
	(1)	ATP	(2)	Plastoquin		(3)	NADH	(4)	FMNH
39.	In pl	notorespiration, C	CO <sub>2</sub> is	released fro	m :				
	(1)	Mitochondria	(2)	Chloroplas	st	(3)	Peroxisome	(4)	Glyoxisome
40.	Sickl	e - cell anemia is	cause	d by :					
	(1)	Viral infection of	f red	blood cells					
	(2)	Amino acid sub	stituti	on in the he	mogle	obin r	nolecule		
	(3)	Excessive dipho	sphog	glycerate					
	(4)	Deficiency of bi	otin						
41.		udent has written ree grows by 15 o					•		m from the soil. If ears ?
	(1)	At 100 cm from	the s	oil	(2)	At 1	30 cm from the	soil	
	(3)	At 115 cm from	the s	oil	(4)	At 1	45 cm from the	soil	
42.	Rest	riction enzymes a	ire :						
	(1)	Enzymes that re	estrict	uncontrolle	d gro	wth o	f cells which res	ult in	cancer
	(2)	Enzymes that r polyploidy	estric	t DNA synt	hesis	to th	e minimum nec	essary	level and prevent
	(3)	Enzymes that cle fragments of re		4	er linl	kages	in DNA only at a	specifi	c sequence yielding
,	(4)	Enzymes that cl	eave	polycistronic	mRN	VA to	yield individual	cistro	ns
43.	The	cells involved in	the bo	one formatio	n are	:			
	(1)	Osteoclast	(2)	Osteocytes	S	(3)	Osteoblast	(4)	Odontoblast

44.	Citri	c acid is industrial	ly pr	oduced by	:					
	(1)	Penicillium notatu	ım		(2)	Sacc	haromyces co	erevisiae		
	(3)	Aspergillus niger			(4)	Pseu	domonas aer	uginosa		
<b>4</b> 5.	Con	nmon lesion found	in D	NA after ex	kposui	re to u	ltraviolet lig	ght is :		
	(1)	pyrimidine dimer	rs		(2)	sing	le strand bro	eak		
	(3)	base depletions			(4)	puri	ne dimers			
46.		subcellular fraction ost likely contains		m liver tiss	ue ex]	hibits	a high level	of acid pl	nosphatase activ	vity,
	(1)	Nuclei			(2)	Lyso	osomes			
	(3)	Endoplasmic reti	iculuı	m	(4)	Mito	ochondrion			
47.		s that recall the pr n an antigen produ				-	~			e to
	(1)	T cells	(2)	BCGF		(3)	BCDF	(4)	Interlukin II	
48.		v many ATP molec os' Cycle ?	cules	can be deri	ived fi	om ea	ach molecul	e of acetyl	CoA that enters	s the
	(1)	6	(2)	12		(3)	18	(4)	38	
49.	The	lysosomal sorting	signa	ıl is :						
	(1)	N - acetyl - gluco	osami	ine	(2)	Ran	: GTP			
	(3)	Mannose - 6 - pł	nospł	nate	(4)	Ribo	ose - 6 - pho	sphate		
50.	End	product of repress	sion (	differs from	ı feedl	oack ii	nhibition by	regulating	:	
	(1)	Enzyme activity			(2)	Enz	yme synthes	sis		
	(3)	Enzyme stability			(4)	Enz	yme folding			

		g to tl	ne vertebra	te cla	ss Mam	nmali	ia as the	whale,	the sloth and the	
(1)	viviparity	(2)	mammary	gland	ds (	(3)	hair	(4)	swim bladder	
Amn	nocoetes larva gr	ows in	to the adul	t :						
(1)	Petromyzon			(2)	Balano	gloss	us			
(3)	Bufo			(4)	Palaem	ion				
In th	e cell membrane	of rod	cells of the	eye, ı	nerve in	npuls	se transm	nission is	s initiated by its :	
(1)	depolarisation			(2)	hyperp	polar	isation			
(3)	repolarisation			(4)	polaris	satio	n			
The	components of th	ne plas	ma membra	ane re	esponsib	ole fo	r active t	ranspor	t are :	
(1)	proteins			(2)	polar e	ends	of fatty	acids		
(3)	fatty acid tails			(4)	only th	he op	en chan	nels		
The	correct statement	regar	ding relatio	nship	betwee	en or	ganisms	and phy	ysical laws is :	
(1)	Life does not ob	ey an	y physical la	aw						
(2)	Life obeys only	the fir	st law of th	ermo	dynamic	cs or	conserva	ation of	energy	
(3)	Life obeys only	the se	cond law of	f theri	modyna	mics	on entro	ру		
(4)	Life obeys both	the pl	nysical laws	of th	ermody	'nam	ics			
		ch lini	ng responsi	ible fo	or alterir	ng the	e pH insi	ide stom	nach cavity by their	
(1)	goblet cells	(2)	oxyntic ce	lls	(3)	chief	cells	(4)	mucus cells	
The	formation of hyp	er - os	motic urine	by h	uman ki	idney	ys does no	ot involv	ve :	
(1)	Secretion of An	ti - Di	uretic Horm	none						
(2)	Vasa - recta									
(3)	Passive diffusio	n of so	olutes							
(4)	Active transpor	t of N	a+/Cl-							
	squin (1)  Amm (1) (3)  In the (1) (3)  The (1) (2) (3) (4)  The secret (1)  The (1) (2) (3)	Ammocoetes larva gr (1) Petromyzon (3) Bufo  In the cell membrane (1) depolarisation (3) repolarisation (3) repolarisation (4) proteins (5) fatty acid tails  The correct statement (1) Life does not obtain (2) Life obeys only (3) Life obeys only (4) Life obeys both  The cells of the stomate secretion are: (1) goblet cells  The formation of hype (1) Secretion of Ammocoetes larva gr (2) Vasa - recta (3) Passive diffusion	squirrel possess:  (1) viviparity (2)  Ammocoetes larva grows in (1) Petromyzon  (3) Bufo  In the cell membrane of rod (1) depolarisation  (3) repolarisation  (3) repolarisation  (4) proteins (5) fatty acid tails  The correct statement regare (1) Life does not obey and (2) Life obeys only the firm (3) Life obeys only the second (4) Life obeys both the plant (5) Life obeys both the plant (6) Life obeys both the plant (7) goblet cells (2)  The formation of hyper - os (1) Secretion of Anti - Direct (2) Vasa - recta (3) Passive diffusion of social contents (1) secreta (1) Passive diffusion of social contents (1) secreta (2) Vasa - recta (3) Passive diffusion of social contents (1) secreta (2) Vasa - recta (3) Passive diffusion of social contents (2) Vasa - recta (3) Passive diffusion of social contents (2) Vasa - recta (3) Passive diffusion of social contents (2) Vasa - recta (3) Passive diffusion of social contents (2) Vasa - recta (3) Passive diffusion of social contents (2) Vasa - recta (3) Passive diffusion of social contents (3) Passive diffusion of social contents (4) Passive diffusion (5) Passive diffusion (6) Passive diffusion	squirrel possess:  (1) viviparity (2) mammary  Ammocoetes larva grows into the adult (1) Petromyzon (3) Bufo  In the cell membrane of rod cells of the (1) depolarisation (3) repolarisation  The components of the plasma membra (1) proteins (3) fatty acid tails  The correct statement regarding relation (1) Life does not obey any physical law of the (3) Life obeys only the first law of the (3) Life obeys only the second law of (4) Life obeys both the physical laws  The cells of the stomach lining responsis secretion are: (1) goblet cells (2) oxyntic cells  The formation of hyper - osmotic urine (1) Secretion of Anti - Diuretic Horm (2) Vasa - recta (3) Passive diffusion of solutes	squirrel possess:  (1) viviparity (2) mammary gland  Ammocoetes larva grows into the adult:  (1) Petromyzon (2)  (3) Bufo (4)  In the cell membrane of rod cells of the eye, of the cell membrane of rod cells of the eye, of the components of the plasma membrane reful) proteins (2)  (3) fatty acid tails (4)  The correct statement regarding relationship (1) Life does not obey any physical law (2) Life obeys only the first law of thermology. Life obeys only the second law of thermology. Life obeys both the physical laws of the the cells of the stomach lining responsible for secretion are:  (1) goblet cells (2) oxyntic cells  The formation of hyper - osmotic urine by how the formation of hyper - osmotic urine by how the cells of the stomach of the cells of the stomach of the cells of the stomach lining responsible for secretion are:  (1) goblet cells (2) oxyntic cells  The formation of hyper - osmotic urine by how the cells of the stomach of the cells of the stomach lining responsible for secretion are:  (1) goblet cells (2) oxyntic cells  The formation of hyper - osmotic urine by how the cells of the stomach of the cells of the stomach lining responsible for secretion are:  (1) goblet cells (2) oxyntic cells  The formation of hyper - osmotic urine by how the cells of the stomach of the cells of the stomach lining responsible for secretion are:  (1) goblet cells (2) oxyntic cells	squirrel possess:  (1) viviparity (2) mammary glands (2)  Ammocoetes larva grows into the adult:  (1) Petromyzon (2) Balano (3) Bufo (4) Palaen  In the cell membrane of rod cells of the eye, nerve in (1) depolarisation (2) hypery (3) repolarisation (4) polaris  The components of the plasma membrane responsible (1) proteins (2) polaris (3) fatty acid tails (4) only the correct statement regarding relationship between (1) Life does not obey any physical law (2) Life obeys only the first law of thermodynamic (3) Life obeys only the second law of thermodynamic (4) Life obeys both the physical laws of thermodynamic (4) Life obeys both the physical laws of thermodynamic (4) Life obeys both the physical laws of thermodynamic (5) The cells of the stomach lining responsible for altering secretion are: (6) goblet cells (2) oxyntic cells (3) oxyntic cells (4) Secretion of Anti - Diuretic Hormone (5) Vasa - recta (6) Passive diffusion of solutes	squirrel possess:  (1) viviparity (2) mammary glands (3)  Ammocoetes larva grows into the adult:  (1) Petromyzon (2) Balanogloss (3) Bufo (4) Palaemon  In the cell membrane of rod cells of the eye, nerve impuls (1) depolarisation (2) hyperpolar (3) repolarisation (4) polarisation  The components of the plasma membrane responsible for (1) proteins (2) polar ends (3) fatty acid tails (4) only the open constant of the does not obey any physical law (2) Life obeys only the first law of thermodynamics of the obeys only the second law of thermodynamics (4) Life obeys both the physical laws of thermodynamics (4) Life obeys both the physical laws of thermodynamics (4) Life obeys only the second law of thermodynamics (4) Life obeys both the physical laws of thermodynamics (4) Life obeys both the physical laws of thermodynamics (4) Life obeys only the second law of thermodynamics (4) Life obeys both the physical laws of thermodynamics (4) Life obeys only the second law of thermodynamics (4) Life obeys both the physical laws of thermodynamics (4) Life obeys only the second law of thermodynamics (4) Life obeys both the physical laws of thermodynamics (4) Life obeys only the second law of thermodynamics (4) Life obeys only the second law of thermodynamics (4) Life obeys only the first law of thermodynamics (4) Life obeys only the first law of thermodynamics or (3) Life obeys only the first law of thermodynamics or (4) Life obeys only the first law of thermodynamics or (3) Life obeys only the first law of thermodynamics or (4) Life obeys only the first law of thermodynamics or (3) Life obeys only the first law of thermodynamics or (4) Life obeys only the first law of thermodynamics or (5) Life obeys only the first law of thermodynamics or (6) Life obeys only the first law of thermodynamics or (7) Life obeys only the first law of thermodynamics or (8) Life obeys only the first law of thermodynamics or (9) Life obeys only the first law of thermodynamics or (1) Life obeys only the first law of thermodynamics or (1) Life obeys o	squirrel possess:  (1) viviparity (2) mammary glands (3) hair  Ammocoetes larva grows into the adult:  (1) Petromyzon (2) Balanoglossus  (3) Bufo (4) Palaemon  In the cell membrane of rod cells of the eye, nerve impulse transm (1) depolarisation (2) hyperpolarisation  (3) repolarisation (4) polarisation  The components of the plasma membrane responsible for active (1) proteins (2) polar ends of fatty (3) fatty acid tails (4) only the open chands  The correct statement regarding relationship between organisms (1) Life does not obey any physical law  (2) Life obeys only the first law of thermodynamics or conserva (3) Life obeys both the physical laws of thermodynamics on entre (4) Life obeys both the physical laws of thermodynamics  The cells of the stomach lining responsible for altering the pH insistence (1) goblet cells (2) oxyntic cells (3) chief cells  The formation of hyper - osmotic urine by human kidneys does not (1) Secretion of Anti - Diuretic Hormone (2) Vasa - recta  (3) Passive diffusion of solutes	squirrel possess:  (1) viviparity (2) mammary glands (3) hair (4)  Ammocoetes larva grows into the adult:  (1) Petromyzon (2) Balanoglossus  (3) Bufo (4) Palaemon  In the cell membrane of rod cells of the eye, nerve impulse transmission is  (1) depolarisation (2) hyperpolarisation  (3) repolarisation (4) polarisation  (1) proteins (2) polar ends of fatty acids  (3) fatty acid tails (4) only the open channels  The correct statement regarding relationship between organisms and phy  (1) Life does not obey any physical law  (2) Life obeys only the first law of thermodynamics or conservation of  (3) Life obeys only the second law of thermodynamics on entropy  (4) Life obeys both the physical laws of thermodynamics  The cells of the stomach lining responsible for altering the pH inside stom secretion are:  (1) goblet cells (2) oxyntic cells (3) chief cells (4)  The formation of hyper - osmotic urine by human kidneys does not involved to Secretion of Anti - Diuretic Hormone  (2) Vasa - recta  (3) Passive diffusion of solutes	(1) viviparity (2) mammary glands (3) hair (4) swim bladder  Ammocoetes larva grows into the adult:  (1) Petromyzon (2) Balanoglossus (3) Bufo (4) Palaemon  In the cell membrane of rod cells of the eye, nerve impulse transmission is initiated by its: (1) depolarisation (2) hyperpolarisation (3) repolarisation (4) polarisation  The components of the plasma membrane responsible for active transport are: (1) proteins (2) polar ends of fatty acids (3) fatty acid tails (4) only the open channels  The correct statement regarding relationship between organisms and physical laws is: (1) Life does not obey any physical law (2) Life obeys only the first law of thermodynamics or conservation of energy (3) Life obeys only the second law of thermodynamics  The cells of the stomach lining responsible for altering the pH inside stomach cavity by their secretion are: (1) goblet cells (2) oxyntic cells (3) chief cells (4) mucus cells  The formation of hyper - osmotic urine by human kidneys does not involve: (1) Secretion of Anti - Diuretic Hormone (2) Vasa - recta (3) Passive diffusion of solutes

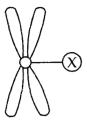
58.	Sele	ct the pair which	does not match:		
	(1)	Honey bee	: Apiculture		
	(2)	Silk worm moth	n : Sericulture		
	(3)	Silver fish	: Silviculture		
	(4)	Fish	: Pisciculture		
<b>59</b> .		itington's chorea h tic Fibrosis gene b			ecting the bearer of the gene than those possessing a :
	(1)	dominant allele			
	(2)	recessive allele			
	(3)	co dominant ge	nes		
	(4)	multiple alleles			
60.	Amı	niocentesis and C	horionic villi sam	npling	are screening techniques wherein:
	(1)	base sequence o	of DNA is checked	d	
	(2)	chromosomes a	re observed and	count	ed
	(3)	resting nuclei a	re cytochemically	anal	ysed
	(4)	fluid containing	dividing nuclei	is sep	arated and analysed
61.	Cho	ose the correct of	otion.		
	Broa	ıd Spectrum antib	piotics do not :		
	(1)	halt microbial g	growth		
	(2)	kill target bacte	ria		
	(3)	destroy wide ra	inge of bacteria		
	(4)	kill pathogenic	viruses		
62.		he following, the inisms is :	one which is not	used a	as a vector for inserting genes to raise transgenic
	(1)	Plasmid		(2)	Bacteriophage
	(3)	Penicillium nota	tum	(4)	Agrobacterium tumefaciens

63.	Whi	ich one of the following pair of terms	s is n	ot synonymous ?
	(1)	Recombinant DNA technology and	d Gei	netic Engineering
	(2)	Genetically modified crops and Tra	ansge	enic crops
	(3)	Restriction enzyme and Restriction	n end	onuclease
	(4)	Virus and bacteriophage		
64.	Eutr	rophication does not result in :		
	(1)	Algal bloom		
	(2)	Increase in aerobic decomposers		
	(3)	Death of aerobic organisms, such a	as fis	h
	(4)	Increase in chlorine content of war	ter	
65.	Nata	ality means :		
	(1)	Net increase in the population		
	(2)	Net decrease in the population		
	(3)	Production of new individuals in t	the p	opulation
	(4)	No change in the population		
66.		e process by which eventual fate of a h neighbouring cells is called :	pop	ulation of cells is altered because of interaction
	(1)	Embryonic induction		
	(2)	Delamination		
	(3)	Stem cell culture		
	(4)	Morphogenesis		·
67.		urtship behaviour between male and vironmental cues triggering :	fema	ale stickleback fishes in spring is an example of
	(1)	Territorial behaviour	(2)	Innate behaviour
	(3)	Learned behaviour	(4)	Reflex action
M.S	c. Lif	fe Science/June 2011	13	P.T.O.

			0 0			volve :		
(1)	Pinocytosis	(2)	Phagocyto	osis	(3)	Involution	(4)	Phototaxis
The	scientific name o	of mod	ern human:	s is :				
(1)	Homo erectus			(2)	Hon	io sapiens sapie	ens	
(3)	Homo habilis			(4)	Aus	tralopithecus aj	farensis	
One	of the following	g featur	es which is	not ty	ypical	of birds is :		
(1)	Syrinx			(2)	Pyg	ostyle		
(3)	Foramen trioss	seum		(4)	Hon	nodont dentiti	ion	
GnF	RH is released by	:						
(1)	Anterior pituit	tary		(2)	Post	erior pituitary	7	
(3)	Hypothalamus	S		(4)	Ute	rus		
If yo	ou wish to see Fe	elis leo i	n their natı	ıral su	ırroun	dings, you sh	ould visi	t :
(1)	Ranthambore	in Raja	isthan	(2)	Ban	dhavgarh in N	Madhya 1	Pradesh
(3)	Simlipal in Ori	issa		(4)	Sesa	ın Gir in Guja	rat	
(1)	All sons and a	ll daug	hters					
(2)	50% sons and	50% d	aughters					
(3)	All sons but 50	0% dau	ighters					
(4)	50% sons and	all dau	ighters					
Soci	al organisation i	n insec	ts is not ex	hibited	d by:			
(1)	Termites	(2)	Honey be	ee	(3)	Ants	(4)	Mosquitoes
	The (1) (3) One (1) (3) If you (1) (3) Nor was (1) (2) (3) (4)	The scientific name of (1) Homo erectus (3) Homo habilis  One of the following (1) Syrinx (3) Foramen trioss  GnRH is released by (1) Anterior pituit (3) Hypothalamus (3) Hypothalamus (3) Simlipal in Orion Normal colour-vision was also colourbline (1) All sons and a (2) 50% sons and (3) All sons but 56 (4) 50% sons and Social organisation is	The scientific name of mod  (1) Homo erectus  (3) Homo habilis  One of the following featur  (1) Syrinx  (3) Foramen triosseum  GnRH is released by:  (1) Anterior pituitary  (3) Hypothalamus  If you wish to see Felis leo i  (1) Ranthambore in Raja  (3) Simlipal in Orissa  Normal colour-visioned Rawas also colourblind. What  (1) All sons and all daug  (2) 50% sons and 50% daug  (3) All sons but 50% daug  (4) 50% sons and all daug  Social organisation in insections.	The scientific name of modern human  (1) Homo erectus  (3) Homo habilis  One of the following features which is  (1) Syrinx  (3) Foramen triosseum  GnRH is released by:  (1) Anterior pituitary  (3) Hypothalamus  If you wish to see Felis leo in their nata  (1) Ranthambore in Rajasthan  (3) Simlipal in Orissa  Normal colour-visioned Radha marrie was also colourblind. What are the ch  (1) All sons and all daughters  (2) 50% sons and 50% daughters  (3) All sons but 50% daughters  (4) 50% sons and all daughters  (5) Social organisation in insects is not ex	The scientific name of modern humans is:  (1) Homo erectus (2) (3) Homo habilis (4)  One of the following features which is not the follow	The scientific name of modern humans is:  (1) Homo erectus (2) Homo (3) Homo habilis (4) Australia  One of the following features which is not typical (1) Syrinx (2) Pygg (3) Foramen triosseum (4) Homo GnRH is released by: (1) Anterior pituitary (2) Post (3) Hypothalamus (4) Uter  If you wish to see Felis leo in their natural surroun (1) Ranthambore in Rajasthan (2) Band (3) Simlipal in Orissa (4) Sesa  Normal colour-visioned Radha married Raja whose was also colourblind. What are the chances of the colour some and all daughters (2) 50% sons and 50% daughters (3) All sons but 50% daughters (4) 50% sons and all daughters (5) Social organisation in insects is not exhibited by:	The scientific name of modern humans is:  (1) Homo erectus (2) Homo sapiens sapid (3) Homo habilis (4) Australopithecus ap  One of the following features which is not typical of birds is: (1) Syrinx (2) Pygostyle (3) Foramen triosseum (4) Homodont dentition  GnRH is released by: (1) Anterior pituitary (2) Posterior pituitary (3) Hypothalamus (4) Uterus  If you wish to see Felis leo in their natural surroundings, you should be sufficiently appropriately appropr	The scientific name of modern humans is:  (1) Homo erectus (2) Homo sapiens sapiens (3) Homo habilis (4) Australopithecus afarensis  One of the following features which is not typical of birds is: (1) Syrinx (2) Pygostyle (3) Foramen triosseum (4) Homodont dentition  GRRH is released by: (1) Anterior pituitary (2) Posterior pituitary (3) Hypothalamus (4) Uterus  If you wish to see Felis leo in their natural surroundings, you should visi (1) Ranthambore in Rajasthan (2) Bandhavgarh in Madhya (3) Simlipal in Orissa (4) Sesan Gir in Gujarat  Normal colour-visioned Radha married Raja whose mother was colourble was also colourblind. What are the chances of their sons and daughters (1) All sons and all daughters (2) 50% sons and 50% daughters (3) All sons but 50% daughters (4) 50% sons and all daughters  Social organisation in insects is not exhibited by:

75.	The term which explains the evolution of similar features in organisms of two different stocks is:											
	(1)	Adaptive Radia	tion		(2)	Mac	ro evolution					
	(3)	Convergent evo	lution	l	(4)	Dive	ergent evolution	n				
76.	GM	crops, Bt cotton a	ınd Bt	brinjal are	called	so be	ecause :					
	(1)	they produce a	toxin	which kills	boll w	orms						
	(2)	they possess a g	ene re	esponsible f	or pro	ducin	g a toxin which	n kills bo	oll worms			
	(3)	they have recon	nbinar	nt DNA froi	m targ	get cro	pp and a bacter	rium				
	(4)	they are named genetic enginee:		he bacteriur	n fron	n who	m they receive	d a parti	cular gene thro	ugh		
77.	In th	ne alcoholics, live	cirrh	osis sets in	due to	the c	leposition in th	e hepati	c cells, of :			
	(1)	fat	(2)	protein		(3)	starch	(4)	alcohol			
78.	Whe	en red blood cells	are st	acked toget	her th	iey:						
	(1)	crenate			(2)	burs	t					
	(3)	form a rouleaux	(		(4)	form	a column of b	olood				
79.	Which forms the subsidiary circulatory system ?											
	(1)	Mucus	(2)	Serum		(3)	Hormones	(4)	Lymph			
80.	The term used for inadequacy of oxygen in blood is :											
	(1)	Anoxia	(2)	Hypoxia		(3)	Asphyxia	(4)	Anorexia			
81.	When impulse arrives at the synapse it first :											
	(1)	triggers entry o	f calci	um ions								
	(2)	releases Acetylo	holine	e								
	(3)	depolarises pre	synap	otic membra	ine							
	(4)	depolarises pos	t syna	ptic membr	ane							

82. The *incorrect* statement about the part of chromosome labelled  $\otimes$  in the diagram given below is:



- (1) it is called primary constriction
- (2) it divides at mitotic anaphase
- (3) it is an indispensible part of the chromosome
- (4) it contains DNA, RNA and proteins
- 83. One of the following is not a consequence of global warming:
  - (1) Melting Ice caps
- (2) Hurricanes
- (3) Ozone depletion
- (4) Drought
- rate of oxygen use

  Y

  period of exercise

  time

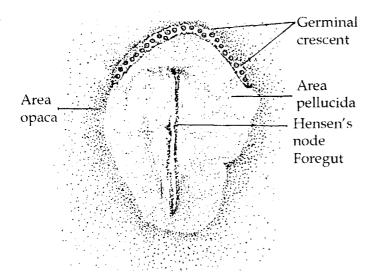
The graph shows rate of oxygen use by a person. The point at which lactic acid concentration will be highest is :

- (1) Y
- (2) Z
- (3) P

- (4) Q
- **85.** The allele for right handedness is H and that for left handedness is h. The chances of offspring inheriting left handedness from two left handed parents is :
  - (1) 25%
- (2) 50%
- (3) 75%
- (4) 100%

<b>86.</b> The amount of DNA in the renal cells of a calf was estimated to be 6.4 picograms. The amount in its RBC and sperms would respectively be :												
	(1)	6.4 and 3.2 picograms	(2)	zero and 3.2 pi	cograms							
	(3)	3.2 and 3.2 picograms	(4)	6.4 and 6.4 pice	ograms							
87.		ageing of a lake is accelerate med :	ed by additio	on of effluents fro	om homes and industries. Th	is						
	(1)	senescence	(2)	bioaccumulatio	on							
	(3)	biomagnification	(4)	eutrophication								
88.	The	inheritance pattern of ABO	blood group	shows :								
	(1)	only dominance										
	(2)	only co dominance										
	(3)	dominance, co dominance	and multipl	e allelism								
	(4)	dominance, co dominance	and pleiotre	ophy								
89.	If 1,0 be :	If 1,000,000 joules of sunlight is available, the energy available to the tertiary consumer will be:										
	(1)	10 J (2) 100	J	(3) 1000 J	(4) 10,000 J							
90.	One	of the enzymes which is no	t involved ii	n DNA replication	n is :							
	(1)	Ligase	(2)	Endonuclease								
	(3)	DNA Polymerase	(4)	Lyase								
91.	The	true statement regarding hu	ıman emb <b>r</b> y	onic developmen	nt is :							
	(1)	no developmental event o	ccurs in the	fallopian tube								
	(2)	Cleavage begins after zygo	ote implants	in the uterus								
	(3)	The epiblast cells form the	placenta									
	(4)	Inner cell mass of blastocy	st eventually	become the foet	tus							

92.



The diagram shown above is:

- (1) the primitive streak stage of chick embryo
- (2) the neural fold stage of chick embryo
- (3) 25 26 hour old chick embryo
- (4) chick embryo after 10 hours incubation
- **93.** When the lac operon is switched on, RNA polymerase recognises and attaches to the site of :
  - (1) Regulator (i) gene
- (2) Promoter (p) gene
- (3) Operator (o) gene

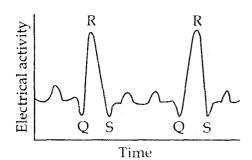
- (4) Structural (z, y, a) genes
- **94.** DDT was found to accumulate in the phytoplankton, zooplankton, small fish, large fish and predatory bird which comprised a food chain. The maximum and minimum amounts of DDT were found in :
  - (1) Large fish and small fish
  - (2) Predatory bird and phytoplankton
  - (3) Phytoplankton and zooplankton
  - (4) Large fish and predatory bird

- 95. Development of resistance to antibiotics in bacteria is an example of :
  - (1) Natural selection

- (2) Selective breeding
- (3) Lamarckian concept of evolution (4) DeVrie's concept of evolution
- **96.** Blood circulation in humans is termed 'double circulation' because :
  - (1) blood circulates in both anterior and posterior regions of the body
  - (2) blood circulates from heart to lungs and then back to heart and then to all parts of the body
  - (3) both oxygenated and deoxygenated blood circulates in the body
  - (4) the heart is divided into two chambers on its left side and two on its right
- 97. The advantage of having millions of alveoli in the human lungs is that:
  - (1) a huge surface area for gas exchange becomes available
  - (2) if some alveoli collapse, others can substitute
  - (3) more oxygen than carbon-dioxide can be obtained
  - (4) vascularisation of the alveoli becomes efficient

i

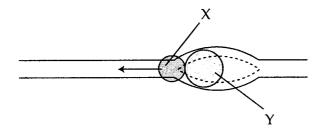
98.



In the ECG shown here, QRS depicts

(1) Joint diastole

- (2) Atrial systole
- (3) Atrio-ventricular diastole
- (4) Ventricular systole



The above diagram shows DNA replication. Two enzymes involved in the process are marked X and Y. Y is DNA polymerase. The name and function of X is :

- (1) Helicase: unwinds helix and breaks H-bonds
- (2) Helicase: holds unzipped strands tight
- (3) Topoisomerase: helps to form sugar phosphate bonds
- (4) Ligase: Joins complementary bases
- 100. The site for TCA cycle in the mitochondria is:
  - (1) Space between the two mitochondrial membranes
  - (2) F<sub>1</sub> particles
  - (3) Mitochondrial matrix
  - (4) Cristae
- 101. Which of the following belongs to Archaebacteria?
  - (1) Sulfobolus
- (2) Agrobacterium
- (3) Salmonella
- (4) Escherichia coli
- 102. Which one of the following viruses has RNA as its genome?
  - (1) HIV

(2) Epstein-Barr virus

(3) Polyoma

- (4) Human Papilloma viruses
- 103. The organisation which publishes the 'Red Data Book' is:
  - (1) National Wildlife Action Plan
  - (2) Convention on International Trade in Endangered species of Wild Fauna and Flora
  - (3) International Union for conservation of Nature and Natural Resources
  - (4) International Panel of Climate Change

	(1)	Forest cover									
	(2)	Area demarcated	arou	and cities and tov	vns to	reduce noise a	ınd poll	ution			
	(3)	Protected areas is	n fore	ests							
	(4)	Terai forest regio	n								
105.	Ethyl	ene, a growth reg	ulato	r is used for :							
	(1)	Retarding ripening	ng of	tomatoes							
	(2)	Speeding up ripe	ning	of fruits							
	(3)	Slowing down ri	penin	g of apples							
	(4)	Both (2) and (3)									
106.	Iatrop	atropalynology is the science of study of:									
	(1)	Pollen grains of honey									
	(2)	(2) Pollengrains causing allergy									
	(3) Toxic pollen grains of honey										
	(4)	Fossil pollen flor	a								
						• 1					
107.		mosome number nosome number (			nnosp	ermous plant	is 8. W	That would be the			
	(1)	8	(2)	16	(3)	24	(4)	32			
108.	Whic	h one of these pr	oduce	seeds without f	ruit ?						
	(1)	Pisum	(2)	Cycas	(3)	Casuarina	(4)	Opuntia			
109.	Таре	tum occurs in the	micr	osporangial wall	betwe	een :					
	(1)	Epidermis and E	Indot	hecium							
	(2)	Endothecium an	d mic	ldle layers							
	(3)	Epidermis and E	Exothe	ecium							
	(4)	Middle layers an									
		•	•	_							

**104.** Green Belt refers to:

110.	Quan	tosomes occur or	n the s	surface of :						
	(1)	Cristae			(2)	Plasr	malemma of chlo	oroplas	sts	
	(3)	Endoplasmic ret	iculun	n	(4)	Thyl				
111.	If the	anthers and the	stigm	a mature al	t diffe	rent ti	imes, this condit	ion is l	known as :	
	(1)	Dicliny	(2)	Dichogam	ıy	(3)	Protogyny	(4)	Herkogamy	
112.	An a	ntitranspirant use	ed by	farmers is	:					
	(1)	Phenyl mercurio	acid		(2)	Abso	cisic acid			
	(3)	Salycylic acid			(4)	All t	he above			
113.		hybrid cross is rortion of the offs		otype	of AaBbCc.	What				
	(1)	0	(2)	1/4		(3)	1/16	(4)	1/64	
114.	Pinu	s wood is non-po	orous,	and is char	racteri	sed by	y:			
	(1)	Absence of com	panio	n cells	(2)	Abs	ence of vessels			
	(3)	Presence of trac	heids		(4)	Abs	ence of tracheid	s		
115.	Welu	vitschia mirabilis is	s foun	d in :						
	(1)	Deserts of Rajas	sthan							
	(2)	Andaman islan	ds							
	(3)	Coastal region of	of Nar	nibia						
	(4)	Coastal region of	of Wes	stern Austr	alia					

116.	In m	nost of the intervarietal and interspecific crosses, embryos fail to form because :									
	(1)	of pollination which does not takes place									
	(2)	of failure of anther formation									
	(3)	of failure of endosperm formation									
	(4)	of failure of ovule formation									
117.	'Hee:	ng' or Asafoetida is latex obtained from :									
	(1)	stem of Euphorbia tirucalli									
	(2)	stem of Manihot esculentum									
	(3)	roots of Ferula									
	(4)	roots of Euphorbia hirta									
118.	Gyno	noecium of Fabaceae is :									
	(1)	Bicarpellary syncarpous									
	(2)	Polycarpellary apocarpous									
	(3)	Polycarpellary syncarpous									
	(4)	Monocarpellary									
440	D										
119.	-	al and <i>Ficus benghalensis</i> often grow in cracks of walls/drain pipes because their seeds lispersed by:									
÷	(1)	Wind (2) Rain (3) Ants (4) Birds									
120.	Wind	d pollinated flowers are :									
	(1)	white in colour and less in number									
	(2)	bright coloured and scented									
	(3)	white in colour and more in number									
	(4)	bright coloured and large									
	` '										

121.	Bt in	popular Bt-Brinjal and B	st–Cotton s	stands	s for :					
	(1)	Biotechnically Produced								
	(2)	Bacillus tomentosa								
	(3)	Bacilius thuringiensis								
	(4)	Biologically tested								
122.	DNA	finger printing technique	e is develo	ped l	эу:					
	(1)	Jeffreys and his co-work	ers							
	(2)	Boysen and Jensen								
	(3)	Edwards and Steptoe								
	(4)	(4) Schleiden and Schwann								
123.	Whic	ch one is not a terminator codon?								
	(1)	UAA (2) U	JAG		(3)	AUG		(4)	UGA	
124.	Barr	bodies result from :								
	(1)	inactivation of one X ch	romosome	by th	ne Y c	hromos	ome			
	(2)	a third X chromosome								
	(3)	inactivation of one X ch	romosome	for c	dosag	e compe	ensation			
	(4)	inactivation of Y chromo	osome by t	the X	chroi	mosome				
125.		ch of the following scient cture ?	tists shared	d the	Nobe	el prize	with Wa	tson a	nd Crick for D	NA
	(1)	Rosalind Franklin		(2)	Paul	ing				
	(3)	Wilkins		(4)	Kho	rana				

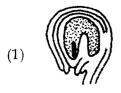
126.	Three genes I G U show crossing over 20% between I and G, 28% between G and U and
	8% between I and U. Sequence of genes will be:

- (1) G I U
- (2) IGU
- (3) IUG
- (4) None is correct

## **127.** Which is the correct match in the following?

- (1) Sickle cell anemia X chromosome
- (2) Down's syndrome 21st chromosome
- (3) Haemophilia Y chromosome
- (4) Parkinson's disease X and Y chromosomes

## **128.** Which of the following is amphitropous ovule?







(3)



(4<sup>)</sup>



# 129. Sexually reproducing organism can contribute to their offsprings:

- (1) All of the genes
- (2) One half of their genes
- (3) One fourth of their genes
- (4) Double the number of genes

## 130. During Iraq - America conflict, which of these were reportedly used as bioweapon?

- (1) Yersinia (Pasteurella) pestis
- (2) Bacillus anthracis
- (3) Streptococcus pyogenes
- (4) Treponema pallidum

	(1)	Noctileuca	(2)	Navicula		(3)	Phacus	(4)	Dictyostelium				
132.	Spath	ne and Spadix ar	e :										
	(1)	homologous org	an										
	(2)	analogous organ	ı										
	(3)	different organs	and I	hence canno	t be c	ompa	red						
	(4)	synonymous											
133.	BOD	(Biological Oxyg	gen De	emand) is :									
	(1)	Amount of oxyg		nsumed by r	nicro	organ	isms for decayinş	g orga	nic matter per unit				
	(2) Amount of oxygen required by aquatic plants and animals for survival												
	(3)	3) Amount of CO <sub>2</sub> consumed by micro-organisms per unit of sewage water											
	(4)	Demand of oxyg	gen by	y aquatic pla	ints fo	or pho	otosynthesis						
134.	Gold	en rice develope	d thro	ugh transge	nic te	chniq	ue is enriched w	ith :					
	(1)	High lysine			(2)	High	n methionine						
	(3)	High glutenin			(4)	High	n vitamin content	t					
135.	Biofe	ertilizer is :											
	(1)	Manure			(2)	Enri	ched manure						
	(3)	Nutrient rich m	icroor	ganisms	(4)	Con	posite manure						
M.S	c. Life	e Science/June 2	2011		26								

131. Night phosphorescence or glow of sea water is due to which of these protists?

	(1)	Duramen	(2)	Alburnum
	(3)	Primary Xylem	(4)	Spring wood
137.	Thre	e types of flowers occur in the	infloresce	ene type of :
	(1)	Capitulum	(2)	Hypanthodium
	(3)	Cyathium	(4)	Umbel
138.	A fru	nit without seed is not possible	in case o	f: C
	(1)	Grape (2) Orang	ge	(3) Pomegranate (4) Berry
139.	Trihy	brid ratio is :		
	(1)	27:9:9:9:3:3:3:1	(2)	27:9:9:6:6:3:3:1
	(3)	1:6:15:20:15:6:1	(4)	36:6:6:6:3:3:3:1
140.	In w	hich of these archegonium is p	oresent ?	÷
	(1)	Spirogyra (2) Funari	ia	(3) Rhizopus (4) Fucus
141.		spread of genes from one breed anges in gene frequency is cal		lation to another by migration which may resul
	(1)	Genetic Drift	(2)	Gene Flow
	(3)	Gene Frequency	(4)	None of the above

**136.** Alternate name of heartwood is:

142.	Seco	ndary cortex cuts	off fr	om:						
	(1)	Intercalary meri	stem		(2)	Prot	oderm			
	(3)	Procambium			(4)	Phel	logen			
143.	Bota	nically Ragi is kno	own a	as:						
	(1)	Avena Sativa			(2)	Sorg	hum Vulgare			
	(3)	Eleusine Coracan	а		(4)	Penr	iisetum typhoide	?s		
						•				
144.		ch one of the follo			s pon					
	(1)	Spirogyra	(2)	Ulothrix		(3)	Anabaena	(4)	Nostoc	
145.	Natio	National Botanical Research Institute is situated in :								
	(1)	Bangaluru	(2)			(3)	Lucknow	(4)	Ootacamand	
146.	Bacte	eria (Monera) lacl	k altei	rnation of g	enera	tions	because there is	s:		
	(1)	Absence of syng	gamy	and reducti	on div	ision				
	(2)	Distinct chromo	some	s are absent	:					
	(3)	No conjugation								
	(4)	No exchange of	gene	tic material						
147.	Mus	hroom is a :								
	(1)	Saprophyte			(2)	Epip	ohyte			
	(3)	Facultative Para	asite		(4)	Obli	igate Parasite			
148	The	deadliest mushro	om is	•						
110.		Agaricus	0111 13	•	(2)	Λ 111	ınita			
	(1)	Pleurotus			(2)					
	(3)	ricuioius			(4)	v oit	variella			
M.S	c. Life	e Science/June 2	2011		28					

149.		A new genus of conifer is recently described from Australia and is also a 'living fossil', the name is :										
	(1)	Metasequoia glyp	otostro	boides	(2)	Wollemia nobilis						
	(3)	(3) Ginkgo biloba				Cycas Circinalis						
150.	. If the haploid number of chromosomes cell would be ?					gymn	osperm is 11,	their n	umber ir	ı endosperm		
	(1)	22	(2)	11		(3)	33 <sup>-</sup>	(4)	44			
				-								
								¥				