88.	Identify acidic oxide							
	1) Cl_2O_7	2) <i>CO</i> ₂	3) N_2O_5	4) All the above				
89.	Among the following	which one has the high	est oxidizing power					
	1) HOCl	2) <i>HClO</i> ₂	3) <i>HClO</i> ₃	4) $HClO_{\scriptscriptstyle A}$				
90.	•	d number of lone pairs	, 3	, <u>,</u>				
	1) sp^3d , 3	2) $sp^3d^2, 2$	3) $sp^3d^3,1$	4) $sp^3,1$				
	1) sp u,5	* *	· •	τ) sp ,1				
Λ1	XX71. * .1 (2.4) (2.1) *		<u>.OGY</u>	4				
91.		g taxonomic categories						
02	1) order	2) kingdom	3) species	4) family				
92.	2. Muscles which regulate the diameter of pupil are1) Ectodermal striated2) Mesodermal striated							
	3) Ectodermal unstriated	ad	4) Mesodermal unstria					
93.		ig is not related to Rocl		ated				
<i>)</i> 3.	1) It is a Rhodophycea	_	2) It contains chl.a and	d chl c				
	3) Diplontic life cycle		4) Two unequal latera					
94.		sociated with nerve fib	, <u> </u>					
	A) Axolemma	B) Neurilemma	C) Endoneurium	D) Myelin sheath				
	E) Axoplasm		· · · · · · · · · · · · · · · · · · ·	_ / j				
		of the above from insi	de to outside w.r.to the	nerve fibre is				
	1) E,A,B,D,C	2) E,A,D,C,B	3) E,A,C,B,D	4) E,A,D,B,C				
95.	How many sentences	are correct related to	Terror of Bengal					
		ion takes place through	_					
	ii) It is free floating hy	drophyte						
	iii) Pulvinus petiole is	present						
	iv) It drains CO_2 from	the water						
	1) All are correct	2) Three are correct	3) Two are correct	4) one is correct				
96.	Identify the correct st	*	s) I we are concer	i) one is confeet				
<i>,</i> 0.	•	crease rate of heart bea	t and cardiac output					
			_	e of heart beat and cardiac				
	output	o8 oo s.,poo		0 01 11001 0 2 000 001 001 0100				
		norepinephrine can inc	rease rate of heart bea	t and cardiac output				
		neural signals can incre						
	1) A,B	2) B,C	3) C,D	4) A,D				
97.	Mismatch is	, ,	, ,	,				
	1) Lycopsida – Selagin	ıella	2) Sphenopsida – <i>Lyc</i> e	opodium				
	3) Pteropsida – Adiant		4) Psilopsida– (psiloti	-				
98.	- ·	combinations from the	following	,				
	A) R.C.Dagar - Polyk	olend	C					
	B) Kyoto protocol – I							
		nservation of wildlife in	urhan areas					
	,	s – Polychlorinated bip						
	1) all the above	2) A,B	3) C,D	4) A,B,C				
99.	· · ·	liospores produced in t	, ,	4) A,b,C				
<i>))</i> .	1) Endogenously, Endo		2) Exogenously, Endo	ogenously				
	3) Endogenously, Endogenously 4) Exogenously, Exogenously							
100	0. Defects in ADH receptors or inability to secrete ADH cause							
100.	1) Diabetes mellitus	2) Diabetes insipidus		4) Renal Calculi				
101	Pneumatophores are	•	3) Oroma	T) Kenai Calculi				
101.	1) Rhizopus	2) Rhizobium	3) Vanda	4) Rhizophora				
	1) Ιπιζοριο	2) Kiuzovimii	S) vanaa	т) кищориоги				

102.	Match the following:							
	Column I		Column II					
	A) J.G. Cells		i) Vasodilator					
	B) Hypothalamus		ii) Vasoconstrictor					
	C) Angiotensin II		iii) Vasopressin					
	D) Atrial Natriuretic I	Factor	iv) Renin					
	A B C D							
	1) iv iii ii i							
	2) ii i iv iii							
	3) iii ii i iv							
	4) ii i iii iv							
103.								
	1) Pinnately compound		2) Alternate phyllotaxy					
	3) Opposite phyllotaxy	– China rose	4) Whorled phyllotaxy -	- Calotropis				
104.	•	quence of "Systemic Ci	_					
			orta \rightarrow tissues \rightarrow right at					
			$s \rightarrow veins \rightarrow right atrium$					
	3) Right ventricle \rightarrow p	ulmonaryaorta $ ightarrow$ tissue	$s \rightarrow pulmonary veins \rightarrow$	→ left atrium				
	4) Right atrium \rightarrow left	ventricle →aorta → tis	ssues \rightarrow veins \rightarrow left atriu	ım				
105.	In mitochondria cytoc	hrome c attached to						
	1) Outer surface of the	inner membrane	2) Outer surface of the o	outer membrane				
	3) Inner surface of the i	nner membrane	4) Inner surface of the o	uter membrane				
106.	Study the following:							
	S_1 : Vaccines may not	guarantee total protect	ion from a disease					
	_	ent to enhance immune						
	-		response					
	Which statement(s) is/							
	1) Both $S_1 \& S_2$	2) Only S_1	3) Only S_2	4) None				
107.	The abundant enzyme	which is present in the	e universe is having					
	a) Dual nature	b) Useful for CO ₂ fixa	tion					
	c) Can also react with	O_2 in excess O_2 concer	ntration in C2 plants					
			2) Only a & b correct					
	1) Only a correct	at	, ·					
100	3) Only a & c are correct		4) All are correct					
108.		vigorous physical exer	cise, deeper breathing c	continues as extra O_2 is				
	required for							
	A) regeneration of oxy	•						
	B) oxidation of accum							
	C) restoration of creat	ine phosphate						
	Choose the correct sta	tements from the abov	e					
	1) A,B	2) A,C	3) B,C	4) all the above				
109.	How many of the plan	ts having axile placenta	ation					
	a) Pisum	b) Brassica	c) Solanum	d) Allium				
	e) Ruscus	f) Butea monosperma						
	1 4	2) 5 3)	6	4) 3				
110.	Identify the mismatch	•						
	1) Insulin Shock – lack							
	2) Tetany – hyposecreti							
	3) Cretinism – congenit							
	4) Pituitary dwarf – Sex	* * *	ormal					

111. Which of the following is wrongly matched in the given table						
	1) Trichoderma	Bacteria	Immunosuppersive ager	nt		
	polysporum					
	2) Streptococcus	Bacteria	Clot buster streptokinas	e		
	3) Monoascus	Fungi	Blood cholesterol lower			
	purpureus					
	4) Yeast	Fungi	Ethanol Production			
112.	*	combination w.r.to 'hor	nology'			
	Male Reproductive Sys		eproductive System			
	1. Cowper's glands	Bart				
	2. Prostate gland	Sker Labi	ne's gland			
	3. Scrotum	Labi	a majora			
	4. Glans Penis	Clito	oris			
113.	The experiment Semio	onservative replication	of DNA was discovered	d plant by Taylor and		
		g following character.				
	1) Nodular roots		2) Descendingly imbrication			
	3) Parietal placentation		3) Non-endoseprmic see	eds		
114.	•		uterine Devices (IUDs)			
	1) They inhibit menstru					
		is of sperms in the uterus	S			
	3) Suppress the motility					
115	4) make the uterus unsu	itable for implantation				
115.	Correct match is	D				
	A 15 NILL CL	B				
	i) ¹⁵ NH ₄ Cl	a) Ruben				
	ii) Ribosomes	b) Calvin				
	111) 1120	c) Meselson & stahl				
	iv) ${}^{14}CO_2$	d) George Palade				
	1) $i - b$ $ii - d$ $iii - d$	-a iv - c				
	2) i - c ii - d iii - 3) i - d iii - a iii -	-a iv $-b$				
	3) $i - d$ $ii - a$ $iii - a$	-b iv $-c$				
	4) $i - a$ $ii - c$ $iii - c$	-d iv $-b$				
116.	Match the following					
	A) World Ozone Day	_	i) September 16			
	B) World Population		ii) March 21			
	C) World Biodiversity		iii) May 22			
	D) World Forestry Da	y	iv) July 11			
	A B C	D	v) June 5			
		iii				
	,	ii				
	a`	V				
	,	ii				
117.	,	hich a linkage map was	s constructed was			
,,	1) Drosophila	2) Rat	3) Neurospora	4) Pisum stativum		
118.	Study the following:	,	, 1	,		
	a) lactiferous duct	b) mammary tubules	c) mammary ducts	d) ampulla		
	e) alveoli	f) nipple	•	•		
	Select the correct sequ		r. to milk ejection in m	ammary glands in human		
	females					
	1) e a b c d f	2) d c a b e f	3) e b c d a f	4) e c b a d f		

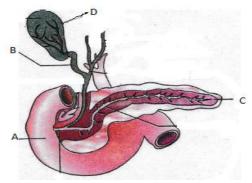
119. Study the following table

Crop	Variety	Resistant					
1.Brassica	Pusa swarnim	White rust					
II. Okra	Pusa sawani	Shoot and stem borer					
III. Chilli	Pusa Komal	Tobacco Mosaic Virus					
IV. Flat bean	Pusa Gaurav	Bacterial blight					
Identify correct pair							

	Crop	Variety				Re	sista	nt				
	1.Brassica	Pusa swarnim		White	e rus	st						
	II. Okra	Pusa sawani	usa sawani Shoot and stem borer									
	III. Chilli	Pusa Komal		Toba	ссо	Mosai	c Vir	us				
	IV. Flat bean	Pusa Gaurav		Bacte	erial	blight					1	
	Identify correct pair										_	
	·	2) III & IV	3)	II & II	Ι			4) I d	& II			
120.	Study the following state											
	S_1 : Capacitation of spen		rej	orodu	ctive	e syste	m					
	S_2 : Capacitation prepare	re the sperms for acro	SO	mal re	acti	on						
	Choose the correct state	ement(s) from the abo	ve									
		2) Only S_1		Only	S_{2}			4) No	one			
121.	Identify the mismatch	, ,	ŕ	•	2			ŕ				
	1) Zn^{+2} - Activates Carbo	oxylases	2)	Mo- P	artic	einate l	Nitro	gen n	netal	holist	m	
	3) K^+ - Structural element	•	,	Mn -		-		•				
122	select the mismatch from		7)	IVIII	5pii	tting 0	ı wa	ici iiic	ricct	110		
122,	A) Hormone releasing I	S										
	B) Copper releasing IUI											
	C) Steroidal oral contra											
	D) Semen isn't produce											
	1) A,B,C	2) B,D	3)	A,D				4) al	l the	abov	ve	
123.	The year 1900 AD is hig	hly significant for ger										
	1)Discovery of genes		,	Princip			_					
	3)Chromosome theory of	•		Redisc		•						
124.	Study the following peri					rrange	e the				_	ence
	•	B) Cambrian	C)	Siluri	an			D) D	evo	nıan		
	E) Permian 1) c d e a f b	F) Ordovician	2)	h f	0	4 6		1) h	0	f o		0
125.		List II	3)	UI	C	u a		4) 0	C	1 a	ı u	C
120.		i. Hormone										
		ii. Ricin										
		iii. Enzyme										
		iv. Codeine										
	Correct match is											
	1) A-III B-I C-II D-IV	,	2)	A-IV	B-I	C-III	D-	I				
	3) A-II B-III C-I D-IV			A-I								
126.	Fossils discovered in Jav	va in 1891 revealed w		_			n eve	olutio	n?			
	1) Homo habilis			Homo								
40=	3) Homo neanderthalensi			Ramaj								
127.	Common Nucleotides (n			_		n both	DN.					
120	,	2) A G C		ATC				4) G	Ct	J		
128.	Which of the following of				n Ei	nchas						
	 Placental mammals in Australia Australian Marsupials 			2) Darwin Finches4) all the above								
129	· .	ded by more than one	,					called				
/·	9. Some aminoacids are coded by more than one codon. This properity of genetic code is called											

1) Unambiguous 2) Universal 3) Degenerate 4) Specific

			••••		• • 7 • 1 • •	.,,,	<u> </u>		
130.	Study the following statements								
	S_1 : Insulin isn't taken orally, for it is a protein and is broken down before it is absorbed								
	S_2 : Genetically engineered E.coli is used to produce humulin Select the correct statement(s) from the above								
							4) None		
121	1) both	•	-		S ₁		4) None		
131.	1) Mono			n taining laye 2) dicot ro		3) Monocot root	4) Dicot stem		
132.	Polymen			,	001	<i>3)</i> Wioliocot 100t	4) Dicot stem		
	1) Can d								
	2) Can d	letect vo	ery lov	w amounts of	DNA				
				ns in gene in	suspected	cancer patients			
122	4) All th			. •					
133.	Hydrop	-	absent		1 ~	2) Watan lilv	1) Zastans		
13/	1) Vallis 'Hisard		on ovo	2) Hydrill	ıa	3) Water lily	4) Zostera		
134.	1) Out –			imple of.		2) Cross – Breed	ino		
	3) Out –		_			4) Inter – Specifi	•		
135.			_	prokaryotes	helpful to		curd from milk and in		
				otics are the					
	1) Cyan					•	4) Heterotrophic bacteria		
136.		_			Transfer m	ethod, fertilized egg	gs at which stage are transferred		
	to surro	_	other		11	2) (0 H	N 40 22 H		
125	1) 4 -16		. •	,	cells	3) $6 - 8$ cells	4) $18 - 32$ cells		
137.				wrong for vi		2) A11 1-	No standarda		
				RNA or DN			ligate parasites		
120	Match t	•			a and prote	ans 4) An or the	m have helical symmetry		
130.	Column		owing	Column 1	TT				
	A. Ig G			i) Presen					
	B. Ig A			*		ce of B-Cells			
	C. Ig D			*		tor in allergic react	ions		
	D. Ig E					_	al passive immunity		
	A	В	C	D	•	•	•		
	1) ii	i	iv	iii					
	2) iv	i	ii	iii					
	3) iv	ii	i	iii					
	4) ii	iii	i	iv					
139.	Which o	of the b	iologi	cal function	is not yet	known			
	1) Prote	-		*	espiration	3) Photosynthesis	s 4) Respiration		
140.				epitheliı	um	A \ \ \ A \ \ \ A \ \ \ A	~ .		
 Ciliated Columnar Non-Ciliated Columnar Ciliated pseudo – stratified Non- ciliated pseudo – stratified 									
1.44		-				•	pseudo – stratified		
141.	_			_	•	_	re fairly high rates upto		
	1) 15cm	ns/hour		2) 15mm/	hour	3) 15 meters/hou	r 4) 25 meters /hour		

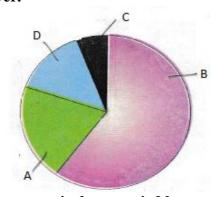


From the diagram given above A,B,C,D are respectively, occupied by

- 1) Duodenum, Duct from gall bladder, Pancreas, Gall bladder.
- 2) Duodenum, Gall bladder, Pancreas, Duct from gall bladder.
- 3) Pancreas, Duct from gall bladder, Duodenum, Gall bladder.
- 4) Pancreas, Hepato Pancreatic duct, Duodenum, Gall bladder.
- 143. The chromosomes in which centromere is situated close to its end
 - 1) Acrocentric
- 2) Telocentric
- 3) Metacentric
- 4) Submetacentric
- 144. A chronic disorder in which alveolar walls are damaged due to which respiratory surface is decreased. Identify it
 - 1) Bronchitis
- 2) Asthma
- 3) Emphysema
- 4) None of the above
- 145. Which of the following hormone shows respiratory climatic
 - 1) ABA
- 2) GA
- 3) Ethylene
- 4) cytokinins

- 146. Identify the wrong statement(s)
 - A) Since the origin of life on earth, there were six episodes of mass extinction of species
 - B) The current species extinction rates are many time faster than in the pre-human times
 - C) Ecologists warn that if the present trends of extinction were to be continued, about half of all the species on earth might be wiped out within the next 100 years.
 - D) Biodiversity hotspots could reduce the ongoing mass extinctions by about 30 percent
 - 1) A.B

- 2) C,D
- 3) Only A
- 4) Only D
- 147. Cell A with π = -15 bars P =9bars, Cell B with π = -10 bars P =8. bars The movement of water is from
 - 1) Both direction
- 2) $A \rightarrow B$
- 3) $B \rightarrow A$
- 4) Nomovement
- 148. Fallowing diagram refers to the relative contribution of Greenhouse gases to global warming. Study the diagram and answer.



A, B, C, D in the diagram are respectively, occupied by

1) CH_4 , CO_2 , CFCs, N_2O

2) CO_2 , CH_4 , CFCs, N_2O

3) CH_4 , CO_2 , N_2O , CFCs

- 4) CFCs, CO_2 , N_2O , CH_4
- 149. Suppressed cotyledon present in maize is called
 - 1) Scutellum
- 2) Epiblast
- 3) Plumule
- 4) Coleoptile

150. Volume of air that remains in the lungs after a normal expiration includes:

- 1) Inspiratory Reserve volume + Residual volume
- 2) Expiratory Reserve volume + Residual volume
- 3) Vital capacity + Residual volume
- 4) Expiratory Reserve volume + Tidal volume

151. Which of the would appear as the pioneer organisms on bare rocks

- 1) Mosses
- 2) Lichens
- 3) Liver worts
- 4) Green algal

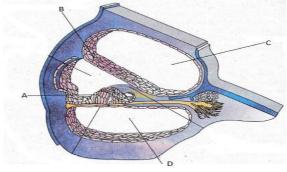
152. The disorder caused by decreased levels of Oestrogen in post-menopause women is

- 1) Osteoarthritis
- 2) Tetany
- 3) Osteoporosis
- 4) Myaesthenia gravis

153. Dual Function containing codon identifies the following aminoacid

- 1) Methionine
- 2) Glycine
- 3) serine
- 4) proline

154. Following diagram refers to the sectional view of cochlea, go through it carefully.



From the diagram A, B, C, D are, respectively, occupied by

- 1) Organ of corti, Basilar membrane, Scala vestibuli, Scala tympani.
- 2) Organ of corti, Reissner's membrane, Scala vestibuli, Scala tympani.
- 3) Reissner's membrane, Tectorial membrane, Scala vestibuli, Scala tympani.
- 4) Organ of corti, tectorial membrane, Scala vestibuli, Scala tympani.

155. Which of the following is correct match

- 1) Sonalika Rice
- 2) Jaya Wheat
- 3) Himgiri Wheat
- 4) Atlas66 maize

156. Read the following statements

S_1 : Fovea is a thinned out – portion of retina where only rods are densely packed

 S_2 : Fovea is a point of greatest visual acuity

Select the correct statement(s)

- 1) both S_1 & S_2
- 2) Only S_1
- 3) Only S_2
- 4) None

157. Maize leads to presistance to maize stem borers due to

- 1) Low aspartic, acid, Low nitrogen and sugar content
- 2) High aspartic, high nitrogen and sugar
- 3) High aspartic low nitrogen and sugar
- 4) High aspartic, low nitrogen and high sugar

158. Match the items given in Column I with those in Column II, and select correct option given below

Column I

Column II

- a. Ophrys
- i. Cardiac glycoside
- b. Calotropis
- ii. Poisonous weed
- c. Monarch butterfly
- iii. Sexual deceit
- d. Warblers
- iv. Resource Partitioning

	a	b	c	d
1)	iii	i	ii	iv
2)	:	:::	:	::

- 2) i iii iv ii
- 3) ii i iii iv
- 4) iv iii ii i

- 159. Number of characters related to xerophyte adaptations containing *Opuntia*
 - a. Stomata opened during day time
- b. CAM Pathway d. flattened stems
- c. Leaves are absent modified in to spines 1) abc correct
 - 2) all are correct
- 3) acd correct
- 4) bcd are correct

- 160. Read the following statements carefully
 - A) Heroin commonly called crack is chemically diacetylmorphine
 - B) Heroin is obtained form latex of poppy plant
 - C) The drug which is obtained from Erythroxylem coca interferes with neuro transmitter dopamine
 - D) Cannabinoids effect cardio vascular system of the human body

Select the correct combinations from the above

- 1) All the above
- 2) A,B,C
- 3) B,D
- 4) B,C,D

- 161. The Avena curvature is used for bioassay of
 - 1) ABA
- 2) 1AA
- 3) Cytotoknin
- 4) *GA*₃

- 162. Vector control Research Centre
 - 1) New Delhi

2) Lucknow

3) Puducherry

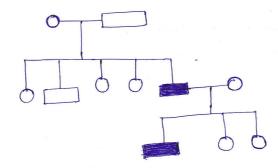
- 4) Mumbai
- 163. S phase of its cell cycle, as compared to gamete of the same species has
 - 1) same number of chromosomes but twice the amount of DNA
 - 2) Twice the number of chromosomes and four times the amount DNA
 - 3) Twice the number of chromosomes and Twice the amount of DNA
 - 4) Four times the number of chromosomes and Twice the amount of DNA
- 164. Match Column I with Column II

Column I

Column II

- A) ZW ZZ type
- i) Grass hoppers
- B) ZO ZZ type
- ii) Drosophila
- C) XX XY type
- iii) Fumea Moths
- D) XX XO type
- iv) Birds
- D A В
- 1) iv iii ii i
- 2) iii iv ii
- 3) ii iii iv i 4) i iv iii ii
- 165. The term ecosystem was coined by
 - 1) E. Warming
- 2) Odum
- 3) Misra
- 4) A.G & Tansley

166. In the Chart, mutant trait is shaded black.



The Gene responsible for the trait is:

1) dominant, sex linked

2) recessive, autosomal

3) dominant, autosomal

- 4) recessive, sex limited
- 167. Which of the following is not included in periderm.
 - 1) Phellem

2) Late wood

3) phelloderm

4) cork cambium

168. What is the basis of DNA fingerprinting?

- 1) Relative proportions of purines & pyrimidines in DNA
- 2) Satellite DNA occurring as highly repeated short DNA segments
- 3) Relative amount of DNA in the ridges & grooves of fingerprints
- 4) All the above

169. Endosperm is n and 3n respectively in

1) Dicots, Monocots

2) Bryophyta, Pteridophyta

3) Gymnosperms, Dicots

4) Pteridophytes, Gymonosperms

170. The region of biosphere reserve where limited human activity is allowed for research, education and resource use strategies

- 1) Core Zone
- 2) Transition Zone
- 3) Buffer Zone
- 4) Restoration Zone

171. Which of the following RNA's should be most abundant in animal cell

- 1) SnRNA
- 2) mRNA
- 3) collagen
- 4) Rrna

172. Identify the animal which isn't a homeotherm:

- 1) Ornithorhyncus
- 2) Aptenodytes
- 3) *Ichthyophis*
- 4) Neophron

173. If there are 999 bases in an RNA that codes for a protein with 333 Amino acids and the base at position 901 is deleted such that the length of the RNA becomes 998 bases, how many codons will be altered

1) 333

- 2) 666
- 3) 11

4) 33

174. Which of the following animal possess file-like rasping organ in its mouth?

- 1) Pleurobranchia
- 2) Alplysia
- 3) Pentaceros
- 4) Lepisma

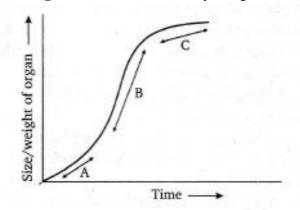
175. What is the criteria for DNA fragments movement on agarose gel during gel eletrophorosis

- 1) The smaller the fragment size, the farther it moves
- 2) Negatively charged fragments do not move
- 3) The larger the fragment the farther it moves
- 4) Positively charged fragments move to farther end

176. Study the following statements, carefully

- S_1 : Thermoregulation is energetically expensive for many organisms, especially the large animals
- S_2 : Small animals have a smaller surface area of body relative to their body volume Select the correct statement(s) from the above
- 1) both S_1 & S_2
- 2) Only S_1
- 3) Only S_2
- 4) None

177. Observe the sigmoid curve given below and identify the phases A,B and C:



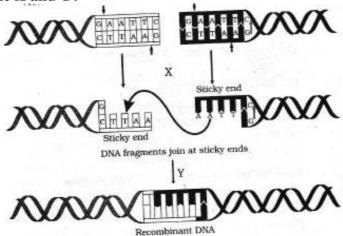
- 1) A= Initial slow growth, B= Rapid growth, C=Phase of growth during limited nutrient supply
- 2) A= Rapid growth, B= Initial slow growth, C=Phase of growth during limited nutrient supply
- 3) A=Lag Phase, B=Stationary phase, C= Exponential phase
- 4) A= Exponential phase, B=Stationary phase, C=Lag phase

- 178. Select the correct statements about Nutrient Cycles
 - A) The amount of nutrients, present in the soil at any given time is called 'Standing Crop'
 - B) The function of the 'reservoir' (of different nutrient cycles) is to meet with the deficit which occurs due to imbalance in the rate of influx and efflux.
 - c) Atmospheric inputs of phosphorus through rainfall are equal to carbon inputs
 - D) Gaseous exchanges of phosphorus between organism and environment are negligible
 - 1) B,D

- 2) C,D
- 3) A,B

4) A,C

179. Identify the enzyme X and Y?



- 1) X = RNA ligase, Y = DNA ligase
- 2) X=Bam HI, Y=RNA-ligase

3) X = Eco RI, Y = DNA-ligase

- 4) X = Hind III, Y = RNA ligase
- 180. Study the following statements about Medical Termination of Pregnancy (Amendment) Act, and identify the correct statement(s).
 - 1) It was amended by the Government of India in 2017
 - 2) According to this Act, a pregnancy may be terminated on certain grounds within the first 12 Weeks of pregnancy on the opinion of one registered medical practitioner.
 - 3) According to this Act, if the pregnancy has lasted between 12 weeks to 24 weeks, the opinion of two registered medical practitioners must be sought for the termination of pregnancy on certain grounds.
 - 4) All the above.