

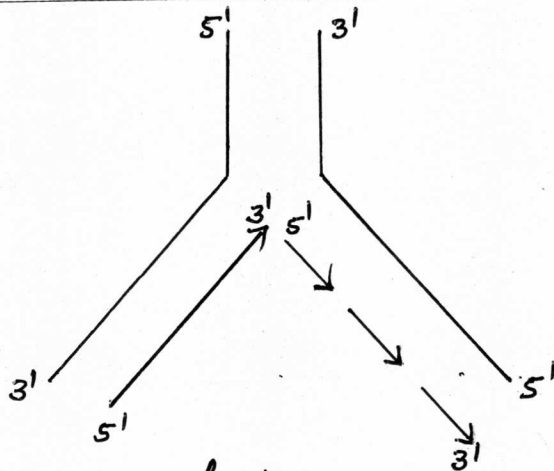
SECOND YEAR HIGHER SECONDARY EXAMINATION, JUNE 2017
(Finalised Scheme of Valuation)

Subject: Biology – Part B Zoology

Code No: 7017 Part B

Qn.No		Scoring Indicators	Split Score	Total Score
1)		b	1	1
2)		Dryopithecus → Australopithecines → Homo Erectus → Neanderthal man → Homo sapiens. (Any 3 in the correct order carries full score)	1	1
3)	a)	A - Perivitelline space / vitelline membrane / Oolemma / Membrane	1/2	2
		B - Zona pellucida	1/2	
	b)	Prevents polyspermy / prevents Entry of further sperms after fertilization / allow the Entry of only one sperm.	1	
4)		Cytidine All others are Nitrogen Bases.	1/2 1/2	1
5)		AIDS - Acquired Immuno Deficiency Syndrome / STD / Deficiency of Immune system. Caused by HIV Prevention - Safe sex, Use of disposable needles and syringes, Ensure safe blood transfusion, etc. (Any 2 relevant points carries one score)	1 1 1	3

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Qn. No	Sub Qns	Answer Key / Value points	Score	Total
6)	a)		$\frac{1}{2}$	2
	b)	Replication fork.	$\frac{1}{2}$	
	c)	Discontinuously synthesised fragments of DNA are joined by DNA ligase.	1	
7)	a)	B is Directional selection C is Disruptive selection.	$\frac{1}{2}$ $\frac{1}{2}$	3
	b)	B - Natural selection leads to directional change in which more individuals acquire value other than the mean character value. C - Natural selection leads to disruption in which more individuals acquire peripheral character value at both ends of the distribution curve.	1	
		(Correct response regarding directional & disruptive selection carries full score)	1	
8)	a)	X-linked / Sex linked inheritance / Mendelian disorder	1	

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	b)	<p>Mendelian disorder is determined by alteration or mutation in the single gene. These disorders are transmitted to the offsprings in the same lines as the principles of Inheritance. eg. Haemophilia, Sickle cell anaemia or any other example in the text.</p> <p>Chromosomal disorder - caused due to the absence of Excess or abnormal arrangement of one or more chromosomes eg. Down's syndrome, Klinefelter's syndrome, Turner's syndrome.</p> <p>* [Correct response regarding Mendelian disorder and Chromosomal disorder with example carries 2 score]</p>	1 1	3
9)	a)	<p>Stammasculation / Removal of Anther from female plant. Significance - Prevents self fertilization / self pollination.</p>	1	2
	b)	<p>Diagrammatic representation of a monohybrid cross between Tall & Dwarf pea plants.</p>	1	

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Qn. No	Sub Qns	Answer Key / Value points	Score	Total
10)	a)	Translation stops as UAA is a stop codon.	1	3
	b)	Point mutation / one nitrogen base is deleted or changed.	1	
	c)	T A C A T A A A G C G A C T A A A A A T C	1	
11)		A - Acquired Immunity B - Physiological Barrier C - Cytokine Barrier D - Passive Immunity	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	2
12)		A - Gobar Gas B - Saccharomyces cerevisiae C - Anabaena D - Biological Control	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	2
13)		A - Metastasis B - Sensitivity to particles C - Immune deficiency disease D - Auto immune deficiency	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	2

Qn. No.	Sub Qns.	Answer key / Value points	Score	Total
14.		<p>a) Genetic Diversity - A single species might show high diversity at the genetic level over its distributional range. / Diversity at genetical level.</p> <p>b) species Diversity - Diversity at species level</p> <p>c) Ecological Diversity - Diversity at Ecosystem level.</p> <p style="text-align: center;">OR</p> <p>In situ conservation - Species are protected in their natural habitat itself. eg. National parks, wild life Sanctuary, Sacred groves etc</p> <p>Ex situ Conservation - Threatened animals and plants are protected outside their natural habitats. eg: zoological parks, Botanical gardens, etc.</p>	<p>1</p> <p>1</p> <p>1</p> <p>1 1/2</p> <p>1 1/2</p>	<p>3</p> <p>3</p>

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