



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – ADVANCED ZOOLOGY AND BIOTECHNOLOGY

THIRD SEMESTER – APRIL 2023

UAZ 3504 – EVOLUTIONARY BIOLOGY

Date: 06-05-2023

Dept. No.

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

SECTION A

Answer ALL the Questions

		(5 x 1 = 5)	
1. Define the following			
a) Primordial earth.	K1	CO1	
b) Neo Darwinism.	K1	CO1	
c) Sympatric speciation	K1	CO1	
d) Palaeontological evidences	K1	CO1	
e) Euphenics	K1	CO1	
2. Fill in the blanks			(5 x 1 = 5)
a) Our planet Earth is formed _____ years ago.	K1	CO1	
b) All species of organisms arise and develop through the _____	K1	CO1	
c) HGP is based on _____ method.	K1	CO1	
d) Ontogeny recapitulate phylogeny is called _____	K1	CO1	
e) Neanderthals disappeared _____ years ago.	K1	CO1	
3. Match the following			(5 x 1 = 5)
a) Inorganic evolution - Chicken and ravens	K2	CO1	
b) Modern synthetic theory - Potassium and carbon	K2	CO1	
c) Adaptive radiation - New species	K2	CO1	
d) Divergent Evolution - Theory of the creation	K2	CO1	
e) Dating- Darwin finches	K2	CO1	
4. True or False			(5 x 1 = 5)
a) Organisms are arises from spontaneously.	K2	CO1	
b) Living plants and animals absorb carbon from the atmosphere.	K2	CO1	
c) Point mutation is a type of mutation occur in DNA only not RNA.	K2	CO1	
d) Two or more distinct species share a common ancestor.	K2	CO1	
e) Vermiform appendix is a vestigial organ.	K2	CO1	

SECTION B

Answer any TWO of the following in 100 words **(2 x 10 = 20)**

5. Illustrate the Urey-Miller experiment	K3	CO2	
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6.	Explain the DeVrie's Mutation theory.	K3	CO2
7.	Prepare and present the modes of speciation.	K3	CO2
8.	Write down the salient features of HGP.	K3	CO2
SECTION C			
Answer any TWO of the following in 100 words		(2 x 10 = 20)	
9.	Analyse the reason for decline of Neanderthals.	K4	CO3
10.	List out the different types of fossil records.	K4	CO3
11.	Compare in detail about Lamarckism and Neo Lamarckism.	K4	CO3
12.	Correlate the adaptive radiation in mammals.	K4	CO3
SECTION D			
Answer any ONE of the following in 250 words		(1 x 20 = 20)	
13.	Discuss in detail about the various evidences for evolution.	K5	CO4
14.	Summarise the process of Geological time scale.	K5	CO4
SECTION E			
Answer any ONE of the following in 250 words		(1 x 20 = 20)	
15.	Summarise the origin of prokaryotes and eukaryotes.	K6	CO5
16.	Describe animal colouration and mimicry.	K6	CO5

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