

ANSWER KEY

SAY/ IMPROVEMENT EXAMINATION , JULY-2022

PART III

SUBJECT: ZOOLOGY

CODE NO : SAY 726

30 SCORES

VERSION Q

1 HOUR

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score	
PART – I					
A. Answer any 3 questions from 1 to 4. Each carries 1 Score					
1		Menarche	1	1	
2		Intra Uterine Device	1	1	
3		AUG	1	1	
4		Hardy-Weinberg Principle / Hardy -Weinberg Equilibrium	1	1	
B. Answer all questions from 5 to 6. Each carries 1 Score					
5		Alexander Fleming / Fleming	1	1	
6		Paul Ehrlich	1	1	
PART - II					
A. Answer any 2 questions from 7 to 9. Each carries 2 Score					
7	a	Clarify bottled juices	1	2	
	b	Used as a clot buster/For removing clots from the blood vessels	1		
8	a	Mating between relatives /(Consanguineous mating)	1	2	
	b	Sex unspecified	1		
9		(i) Avoid undue peer pressure	½	2	
		(ii) Education and Counselling	½		
		(iii) Seeking help from parents and peers	½		
		(iv) Looking for danger signs	½		
		(v) Seeking professional and medical help	½		
[Relevant 4 points carries full score]					
B. Answer any 2 questions from 10 to 13. Each carries 2 Score					
10		Panspermia /Theory of spontaneous generation/ Chemical evolution/ Biogenesis [Any two correct responses carries full score]	1+1	2	
11		A		2	
		Type of barrier	B		
		Physical barrier	Skin		½
		Physiological barrier	Saliva in mouth		½
		Cellullar barrier	Neutrophil		½
		Cytokine barrier	Interferon	½	
12		(i) They could be grown on simple synthetic medium in the laboratory	1+1	2	
		(ii) Complete life cycle in two weeks			
		(iii) Single mating produces a large number of progeny flies			
		(iv) Clear differentiation of the sexes			
		(v) It has many types of hereditary variations that can be seen with low power microscope			
[Any two correct responses carry full score]					

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score															
13		Spermatozoan / Sperm / Male gamete	½	2															
		(A) Acrosome	½																
		(B) Middle piece	½																
		(C) Tail	½																
PART –III																			
Answer any 3 questions from 14 to 17. Each carries 3 Score																			
14		(i) Gene migration or Gene flow	1	3															
		(ii) Genetic drift																	
		(iii) Mutation																	
		(iv) Genetic recombination																	
		(v) Natural selection																	
[Any 3 correct responses carry full score]																			
15	a	Haemophilia	1	3															
	b	Sickle cell anaemia	1																
	c	Phenylketonuria	1																
16		<i>In situ</i> conservation <i>Ex situ</i> conservation On site conservation Off site conservation [Relevant responses carry 1 score]	1	3															
		Examples Sacred groves/ Biosphere reserves/ National Parks/ Wildlife sanctuaries	Examples Zoological parks/ Botanical gardens/ Wildlife safari parks/ Seed banks/ Cryopreservation of gametes [Two correct examples from each - carry 2 score]		1+1														
17		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">A</th> <th style="width: 33%;">B</th> <th style="width: 33%;">C</th> </tr> </thead> <tbody> <tr> <td>Disease</td> <td>Causative Organism</td> <td>Type of Pathogen</td> </tr> <tr> <td>Typhoid</td> <td><i>Salmonella typhi</i></td> <td>Bacteria</td> </tr> <tr> <td>Malaria</td> <td><i>Plasmodium</i></td> <td>Protozoa</td> </tr> <tr> <td>Ringworm</td> <td><i>Microsporium</i></td> <td>Fungus</td> </tr> </tbody> </table>	A	B	C	Disease	Causative Organism	Type of Pathogen	Typhoid	<i>Salmonella typhi</i>	Bacteria	Malaria	<i>Plasmodium</i>	Protozoa	Ringworm	<i>Microsporium</i>	Fungus	1	3
	A	B	C																
	Disease	Causative Organism	Type of Pathogen																
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Ringworm	<i>Microsporium</i>	Fungus																	
		1																	
		1																	
		1																	
A. Answer the following question. It carries 3 Scores																			
18		(i) Initiation : RNA polymerase binds to promoter and starts transcription	½ + ½	3															
		(ii) Elongation : Polymerisation of triphosphate with the help of RNA polymerase	½ + ½																
		(iii) Termination : Polymerase enzyme reaches the termination region and results in the stoppage of transcription process [Relevant points carry full score]	½ + ½																
PART - IV																			
Answer any 1 question from 19 to 20. Each carries 5 Score																			
19	a	A – Seminal vesicle	½	5															
		B – Prostate gland	½																
		C – Testis	½																
		D – Epididymis	½																
		Vas deferens	1																
	b	Vasectomy and Tubectomy [Two terms carry 2 score]	1+1																

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
20	a	A – Digestion of DNA by restriction endonucleases	1	5
		B – Separation of DNA fragments by electrophoresis	1	
		C- Hybridisation using labelled VNTR probe [Relevant points carry 3 scores]	1	
	b	In forensic science procedures	1	
		Determination of population and genetic diversities	1	
		In the case of paternal disputes		

Scheme Finalized by:

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