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ANSWER KEY

2nd YEAR HIGHER SECONDARY EXAMINATION March 2022

PART-I/II/III

SUBJECT: ZOOLOGY

CODE NO: ~~84526~~ SY-26

VERSION: 5

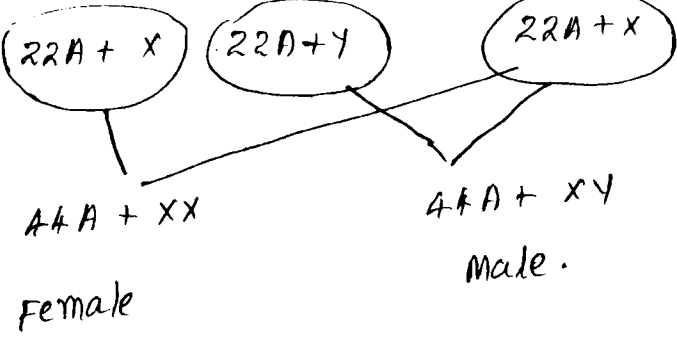
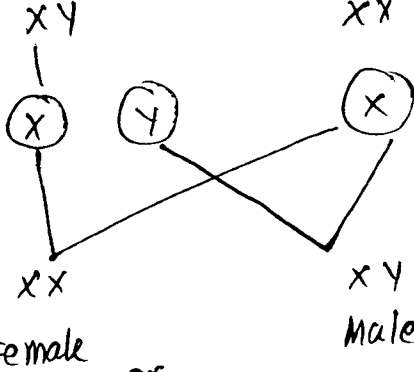
30 SCORES

1 HOURS

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
A		PART I Answer any three questions from 1-4, each carries 1 score		
1		convergent evolution	1	1
2		zygote intra fallopian transfer	1	1
3.		cleavage / formation of morula	1	1
4		DNA ligase / ligase / Molecular glue	1	1
B		Answer all questions from 5-6, each carries 1 score.		
5		Edward Wilson	1	1
6		Penicillin	1	1
A		PART- II Answer any 2 from 7-9 (2 scores)		
7.	a.	Methionine	1	2
	b.	UAA / UAG / UGA	1	

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score										
8.	a.	secrete androgen or testosterone/ Male hormones/ spermatogenesis	1	2										
	b.	secretes progesterone/ maintains pregnancy. 1	1											
9		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">A</th> <th style="width: 50%;">B</th> </tr> </thead> <tbody> <tr> <td>(i) Trichoderma polysporum</td> <td>(e) Cyclosporin - A</td> </tr> <tr> <td>(ii) Monascus purpureus</td> <td>(d) statin</td> </tr> <tr> <td>(iii) Saccharomyces cerevisiae</td> <td>(b) ethanol</td> </tr> <tr> <td>(iv) Aspergillus niger</td> <td>(a) Citric acid.</td> </tr> </tbody> </table>	A	B	(i) Trichoderma polysporum	(e) Cyclosporin - A	(ii) Monascus purpureus	(d) statin	(iii) Saccharomyces cerevisiae	(b) ethanol	(iv) Aspergillus niger	(a) Citric acid.	4 x 1/2	2
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10		<p>Answer any 2 from 10-13, score - 2</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">A</th> <th style="width: 50%;">B</th> </tr> </thead> <tbody> <tr> <td>1. Natural selection</td> <td>- Darwinism</td> </tr> <tr> <td>2. Chemical evolution</td> <td>- Miller's experiment</td> </tr> <tr> <td>3. Origin of Universe</td> <td>- Big bang Theory</td> </tr> <tr> <td>4. Use and disuse of organs</td> <td>- Lamarckism</td> </tr> </tbody> </table>	A	B	1. Natural selection	- Darwinism	2. Chemical evolution	- Miller's experiment	3. Origin of Universe	- Big bang Theory	4. Use and disuse of organs	- Lamarckism	4 x 1/2	2
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11.		<p>Respiratory failure/ heart failure/ cerebral haemorrhage/ warning signs like drop in academic performance/ Unexplained absence from school/ depression/ aggressive and rebellious behaviour/ loss of interests in hobbies/ stealing/ mental or financial stress to person and family/ infections like AIDS, Hepatitis B, Cirrhosis etc. (Any four relevant answers)</p>	4 x 1/2	2										

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
12	a. b.	Acrosome Helps in fertilization/lysis of ovarian membrane for penetration of sperm.	1 1	2
13	a. b.	Male heterogamety: Male organism produces two types of sperms / Male determines sex / relevant illustration or representation. Female heterogamety: Female produce two types of eggs or ova / female determines sex / relevant illustration or representation. Male heterogamety - Man / insects like honey bee, grass hopper, drosophila Female heterogamety - Birds.	1/2 1/2 1/2 1/2	2
PART - III				
14	a. b.	Answer any 3 from 14-17, 3 score Hardy-Weinberg principle Gene migration / Gene flow / Mutation / re combination / Genetic drift / natural selection.	1 4x1/2	3
15		Father exhibits male heterogamety / father produce two types sperms. (22A+X) (22A+Y) or (X) (Y) Female produce one type of ovum (22A+X) or (X). When ovum fused with (22A+X) sperm, the child will be female. When ovum fused with (22A+Y) sperm, the child will be male.	1 1 1	3

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
		<p style="text-align: center;"> Father Mother $44A + XY$ $44A + XX$  $44A + XX$ $44A + XY$ Female Male. or Father Mother XY XX  XX XY Female Male. or Any other response regarding female heterogamety citing suitable example, shall be considered. </p>		
16.	<p>a.</p> <p>b.</p>	<p>sexually transmitted diseases / Diseases transmitted through sexual contact</p> <p>Gonorrhoea, syphilis, Genital herpes / chlamydiasis / venereal warts / Trichomoniasis hepatitis B, AIDS Any four.</p>	<p>1</p> <p>4x1/2</p>	<p>5</p>

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
17	a.	Habitat loss and fragmentation, over exploitation, Alien species invasion, co extinction	4 x 1/2 2	3
	b.	Examples: Insitu - National park, Biosphere reserves, wildlife sanctuaries, sacred grooves, hotspot etc. (any one) Exitu - zoological park, Botanical garden, wild life safari park, seed banks, Cryo-preservation etc (any one)	1/2 1/2	
B 18.	a.	Answer the following question. Deoxy ribo nucleic acid, Watson and Crick	1/2 + 1/2 = 1 4 x 1/2 2	3
19.	a.	<u>PART IV</u> Answer any one. from 19-20, 5 score. Acquired immuno deficiency syndrome, Human immuno deficiency virus/HIV	1 1	5
	b.	ELISA Enzyme Linked Immuno sorbent assay	1	
	c.	Making blood safe from HIV (from blood bank) / use of disposable needles and syringes / use of condoms during sexual contact / Advocate safe sex / promote regular - R check ups to susceptible population Any four relevant answer	4 x 1/2 2	
20	a.	A - promoter B - Template strand	1 1	5
	b.	Copying / formation of RNA from template DNA strand (Antisense strand) DNA → RNA	1	
	c.	3' - T A C G T A C G T A - 5'	2	

Scheme Finalisation. SY.26 March.2022

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