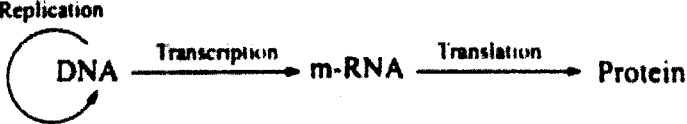


ANSWER KEY
SECOND YEAR HIGHER SECONDARY EXAMINATION MARCH 2023
PART III
SUBJECT: ZOOLOGY

QP CODE : SY 526B

MAX SCORE : 30
 TIME : 1 HOUR

Qn. No	Sub Qns	Answer key/ Value points	Score	Total score
I. Answer any 3 questions from 1-5. Each carries 1 score.				
1		Fallopian tube All others are parts of male reproductive system/ Fallopian tube is a part of female reproductive system	½ ½	1
2		 <p style="text-align: center;">OR</p> DNA → RNA /Transcription RNA → Protein/ Translation DNA → DNA /Replication Any two steps carry full score	½ ½	1
3		c) / <i>Saccharomyces cerevisiae</i>	1	1
4		c) / Malaria- <i>Plasmodium</i>	1	1
5		Zoological park Botanical garden	½ ½	1
II. Answer any 9 questions from 6-16. Each carries 2 scores				
6	A)	Human chorionic gonadotropin (hCG), Human placental lactogen (hPL), estrogens, progestogens (Any TWO hormones)	½ ½	2
	B)	Supply of oxygen / Nutrients/Removal of CO ₂ / Removal of waste/Excretion/transfer of antibody/ Immunity Any TWO functions	½ ½	
7	i)	A-Progesterone B-Estrogen	½ ½	2

	ii)	Graafian follicle transform as corpus luteum/ Corpus luteum secretes progesterone(Hormone)/ Degeneration of corpus luteum/if there is no pregnancy no formation of ovum in Graafian follicle till next cycle Any TWO events	½ ½		
8		Intra Uterine Devices/Devices inserted in the uterus Copper releasing IUDs – CuT/Cu7/Multiload 375 Hormone releasing IUDs - Progestasert/LNG-20	1 ½ ½	2	
9		Genetic Disorders	Genetic Reasons	2	
		Klinefelter’s syndrome	Presence of an extra X chromosome in males (XXY)		½
		Down’s syndrome	21 st Trisomy		½
		Turner’s syndrome	Lack of one X chromosome in females (XO)		½
		Phenylketonuria	Due to autosomal recessive trait		½
10	i)	A-Terminator B-Coding strand	½ ½	2	
	ii)	Template codes for RNA/ hnRNA Synthesis / mRNA Synthesis /RNA Synthesis/ Template for RNA synthesis	1		
11	A	Different structure for same function OR Correct explanation of convergent evolution with analogous organs	1	2	
	B	i/ Eyes of octopus and mammals iii/ Wings of butterfly and of birds	½ ½		
12		A- <i>Australopithecines</i> B – <i>Homo habilis</i> C – <i>Homo erectus</i> D - <i>Homo sapiens</i>	½ ½ ½ ½	2	
13		Active Immunity - Antibodies are produced in the host body exposed to antigens/ Slow and takes time to give its full effective response.	1	2	
		Passive immunity - Readymade antibodies are directly given to protect the body against foreign agents./Quick immune response Only examples of active immunity and passive immunity can be given 1 score	1		

14		(i) Avoid undue peer pressure (ii) Education and counseling (iii) Seeking help from parents and peers (iv) Looking for danger signs (v) Seeking professional and medical help Any four points/Any relevant four points	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	2
15	A	i) <i>Trichoderma</i> / <i>Trichoderma polysporum</i> ii) <i>Streptococcus</i>	$\frac{1}{2}$ $\frac{1}{2}$	2
	B	i) immunosuppressant / used in organ transplantation. ii) Clot buster /removing clots from the blood vessels.	$\frac{1}{2}$ $\frac{1}{2}$	
16	A	Vertebrates - Fishes Invertebrates - Insects	$\frac{1}{2}$ $\frac{1}{2}$	2
	B	i) Genetic diversity ii) Species diversity iii) Ecological diversity (Any Two)	$\frac{1}{2}$ $\frac{1}{2}$	
III. Answer any 3 questions from 17-20. Each carries 3 scores				
17	A	Sexually transmitted infections / Sexually transmitted Diseases /Veneral diseases/Reproductive tract infections OR Explanation with similar points	1	3
	B	Gonorrhoea, Syphilis, Genital herpes , Chlamydiasis, Genital warts, Trichomoniasis /Hepatitis - B /AIDS/ HIV infection (Any TWO)	$\frac{1}{2}$ $\frac{1}{2}$	
	C	<ul style="list-style-type: none"> • Avoid sex with unknown partners/multiple partners • Always use condoms during coitus. • In case of doubt, one should go to a qualified doctor for early detection and get complete treatment if diagnosed with infection. (Any TWO)	$\frac{1}{2}$ $\frac{1}{2}$	

18	A	Incomplete dominance/ Dominance is not complete	1					
	B	<div style="text-align: center;"> <p style="text-align: center;"> Rr Pink \times Rr Pink \textcircled{R} \textcircled{r} \textcircled{R} <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="padding: 5px;">RR Red</td> <td style="padding: 5px;">Rr Pink</td> </tr> <tr> <td style="padding: 5px;">Rr Pink</td> <td style="padding: 5px;">rr White</td> </tr> </table> \textcircled{r} </p> </div> <p style="margin-top: 20px;"> Red : Pink : White 1 : 2 : 1 (Answer with out punnet square 1½ score) (Punnet square with genotypes only 1½ score) (Punnet square with phenotypes only 1½ score) </p>	RR Red	Rr Pink	Rr Pink	rr White	2	3
RR Red	Rr Pink							
Rr Pink	rr White							
19	i)	Habitat loss and fragmentation Over-exploitation	½ ½					
	ii)	<u>Co-extinction:</u> When a species become extinct another species associated with it also become extinct. OR Answer with similar meaning Eg. - Plant-pollinator, Host - parasite or other general example Any ONE example <u>Alien species invasion:</u> The introduction of alien species cause the decline or extinction of indigenous species. OR Answer with similar meaning Eg - The Nile perch/ carrot grass (<i>Parthenium</i>) / <i>Lantana</i> / water hyacinth (<i>Eicchornia</i>) / African cat fish (<i>Clarias gariepinus</i>) Or any relevant example	½ ½ ½ ½	3				

20	<p>1. <i>Streptococcus pneumonia</i> - S (Smooth) Strain , R (Rough) Strain</p> <p>2. S Strain inject into mice, mice die R Strain inject into mice, mice live S Strain (heat killed) inject into mice, mice live S strain (heat killed) + R Strain (live) inject into mice, mice die</p> <p style="text-align: center;">OR</p> <p>Explanation with above points</p>	<p>1</p> <p>½</p> <p>½</p> <p>½</p> <p>½</p>	3
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