

SY-426

**SECOND YEAR HIGHER SECONDARY MODEL EXAMINATION, MARCH 2025
ZOOLOGY UNOFFICAL ANSWER KEY**

I Answer any 3 questions from 1 to 5.Each carries 1 score		
Qn No.	Scoring Key	Score
1	Saheli	1
2	Allergy	1
3	a)Ovary b)Progesterone	$\frac{1}{2}$ $\frac{1}{2}$
4	30	1
5	Haemophilia	1
II Answer any 9 questions from 6 to 16.Each carries 2 score		
6	<p>a)No, It is transmitted through</p> <p>(a) Sexual contact with infected person, (b)By transfusion of contaminated blood and blood products, (c) By sharing infected needles as in the case of intravenous drug abusers (d)From infected mother to her child through placenta.</p> <p>b)ELISA /Enzyme linked immune sorbent assay</p> <p>C) (Any one preventive measure/Relevant answer)</p> <ol style="list-style-type: none"> Making blood (from blood banks) safe from HIV, Ensuring the use of only disposable needles and syringes in public and private hospitals and clinics, Free distribution of condoms, controlling drug abuse, Advocating safe sex and promoting regular check-ups for HIV in susceptible populations, are some such steps taken up. but cannot prevent death, which is inevitable. 	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$
7	a) Lactic acid b) Biocontrol c)Citric acid d) <i>Clostridium butylicum</i>	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$
8	a)Lactose b)O-Operator	1 $\frac{1}{2}$

	P-Promoter	$\frac{1}{2}$										
9	A-Ramapithecus B- <i>Homo habilis</i> C- <i>Homo erects</i> D- <i>Homo sapiens</i>	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$										
10	a)UAA,UGA,UAG b)AUG	1 $\frac{1}{2}$ $\frac{1}{2}$										
11	a)ZIFT-zygote intra fallopian transfer b)ICSI-Intra cytoplasmic sperm injection	1 1										
12	<table border="1"> <thead> <tr> <th>Coumn A</th> <th>Coumn B</th> </tr> </thead> <tbody> <tr> <td>Physical barrier</td> <td>Skin</td> </tr> <tr> <td>Physiological barrier</td> <td>Saliva in mouth</td> </tr> <tr> <td>Cellular barrier</td> <td>Neutrophil</td> </tr> <tr> <td>Cytokine barrier</td> <td>Interferon</td> </tr> </tbody> </table>	Coumn A	Coumn B	Physical barrier	Skin	Physiological barrier	Saliva in mouth	Cellular barrier	Neutrophil	Cytokine barrier	Interferon	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$
Coumn A	Coumn B											
Physical barrier	Skin											
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13	a)Mating b)Mating between relatives/ consanguineous mating c)Affected female d)Male/ un affected male	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$										
14	a)Fimbriae b)Isthmus c) Infundibulum. d)Ampulla	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$										
15	a)Incomplete dominance b)Genotypic ratio: 1:2:1 Phenotypic ratio: 1:2:1	1 $\frac{1}{2}$ $\frac{1}{2}$										
16	a) Hardy-Weinberg principle b) i) Gene migration or gene flow, ii) Genetic drift, iii) Mutation, iv) Genetic recombination and v) Natural selection (Any 3 factors)	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$										
III Answer any 3 questions from 17 to 20.Each carries 3 score												
17	a)A-Cu T B-Vasectomy b)Yes It is used to determine the sex of the child, and to kill normal female fetus. Hence determination of sex by amniocentesis has been legally banned to avoid female foeticides/this technique is being misused to detect the sex of the child before birth and the female foetus is then aborted. Thus, to prevent the increasing female foeticides, it is necessary to ban the usage of amniocentesis technique for	1+1 $\frac{1}{2}$ $\frac{1}{2}$										

	determining the sex of a child	
18	<p>a) Hershey-Chase experiment</p> <p>b) To determine DNA is the genetic material/They worked to discover whether it was protein or DNA from the viruses that entered the bacteria/ to determine if DNA or protein is the genetic material</p> <p>c) A-Infection B-Blending C-Centrifugation</p>	<p>1</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p>
19	<p>a) A-Habitat loss and fragmentation B-Over-exploitation C-Alien species invasion D-Co-extinction</p> <p>b) In-situ conservation Ex-situ conservation.</p>	<p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p>
20	<p>a) Male heterogamety is a condition where male organisms produce two different types of sex gametes</p> <p>b) In man sex is determined by the type of sperm entering into the egg, Father will determine the sex of the baby/If the sperm containing X chromosome fused with egg female baby is produced, If the sperm containing Y chromosome fused with egg male baby is produced/ (Any Relevant answer/ Cross carries 1 score)</p> <p>c) Egg, In chicks, the egg is responsible for sex determination. The female (egg) determines the sex of the offspring, not the sperm from the male; this is because birds have a ZZ-ZW method of sex determination. Here females are the heterogametic sex with ZW chromosomes, while males are homogametic with ZZ chromosomes. (Any Relevant answer/ Cross carries $\frac{1}{2}$ score)</p>	<p>1</p> <p>1</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p>