

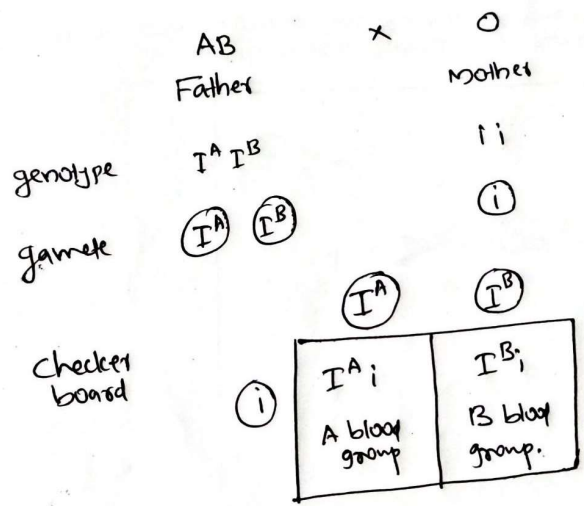
SY -4026

SECOND YEAR HIGHER SECONDARY
SECOND TERMINAL EXAMINATION, DECEMBER 2025
ZOOLOGY ANSWER KEY

I Answer any 3 questions from 1 to 5. Each carries 1 score

Qn No.	Scoring Key	Score
1	(a) Corpus luteum (b) Morula	$\frac{1}{2}$ $\frac{1}{2}$
2	(d) Hen	1
3	Exons	1
4	44A+XO / 45 with XO	1
5	Yes, They will not grow in areas that are polluted	$\frac{1}{2}$ $\frac{1}{2}$

II Answer any 9 questions from 6 to 16. Each carries 2 score

6	a) 200 mya-Fish like reptiles b) 320 mya-Plants and sea weeds c) 350 mya-Jawless fish/Lobe finned fish d) 500 mya-Invertebrates	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$
7	a) Pneumonia b) Ringworm	1 1
8	a) Sertoli cells : it provide nutrition to germ cells b) Trophoblast : Helps in the attachment of blastocyst into the uterine wall (Endometrium) / Formation for placenta	1 1
9	 <p>Possible blood group of children : A blood group/B blood group</p>	1 1
10	a) Gamete intra fallopian transfer b) Zygote intra fallopian transfer	1 1
11	a) Translation/The process of polymerisation of amino acids to form a	1

	polypeptide b) They are required for efficient translation process.	1
12	a) Hepatitis B vaccine b) Memory of the immune system/memory cells formation	1 1
13	a) A-Fimbriae B-Ovary b) which help in collection of the ovum after ovulation	$\frac{1}{2} + \frac{1}{2}$ 1
14	a) Sexually transmitted infections/Infections or diseases which are transmitted through sexual intercourse are collectively called sexually transmitted infections b) No, Contraceptive pills only prevent pregnancy, not disease. STIs can be prevented by the following methods (i) Avoid sex with unknown partners/multiple partners. (ii) Always try to use condoms during coitus. (iii) In case of doubt, one should go to a qualified doctor for early detection and get complete treatment if diagnosed with infection.	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$
15	1-They could be grown on simple synthetic medium in the laboratory. 2-They complete their life cycle in about two weeks 3- A single mating could produce a large number of progeny flies. 4- There was a clear differentiation of the sexes - the male and female flies are easily distinguishable. 5- It has many types of hereditary variations that can be seen with low power microscopes (Write any two reason)	1 1
16	<u>i) Splicing:</u> The primary transcripts contain both the exons and the introns and are non-functional. Hence, it is subjected to a process called splicing where the introns are removed and exons are joined in a defined order <u>ii) Capping :</u> In capping an unusual nucleotide (methyl guanosine triphosphate) is added to the 5'-end of hnRNA. <u>iii) Tailing :</u> In tailing, adenylate residues (200-300) are added at 3'-end in a template independent manner (Write any two)	1 1
III Answer any 3 questions from 17 to 20. Each carries 3 score		
17	a) A-Stabilising selection B-Directional selection C-Disruptive selection b) When a new population starts from a small number of individuals from a larger parent population, leading to reduced genetic diversity and potentially different gene frequencies in the new group.	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ 1

	c) Hardy-Weinberg principle	$\frac{1}{2}$
18	a) i)Physical barrier :Skin	$\frac{1}{2}$
	ii)Physiological barrier : Saliva in mouth	$\frac{1}{2}$
	iii)Cellular barrier :Leucocytes	$\frac{1}{2}$
	iv)Cytokine barrier :Interferons	$\frac{1}{2}$
	b) The exaggerated response of the immune system to certain antigens present in the environment is called allergy	$\frac{1}{2}$
	b)IgE	$\frac{1}{2}$
19	(i) Transcriptional level (formation of primary transcript),	1
	(ii) Processing level (regulation of splicing),	1
	(iii) Transport of mRNA from nucleus to the cytoplasm,	1
	(iv) Translational level. (Write any three)	
20	a) Homologous organs in animals	1
	b)It indicate common ancestry of different organisms/These organisms have evolved from a common ancestor but adapted to different functions/Provide evidence for divergent evolution	1
	c) vertebrate hearts /brains/ Thorn and tendrils of Bougainvillea and Cucurbita (Write any two examples)	$\frac{1}{2} + \frac{1}{2}$