

## ZOOLOGY

### Answer Key

QUESTION NUMBER	ANSWER KEY	SCORE DETAILS	TOTAL SCORE										
1	44 + x0	1	1										
2	Sertoli cells	1	1										
3	Ampullary isthmic junction	1	1										
4	a) Amniocentesis b) To prevent female foeticide	1 1	2										
5	a) Gonorrhoea, /genital herpes, /chlamydia/, genital warts/, trichomoniasis/, hepatitis-B( any two) b) (i) Avoid sex with unknown partners/multiple partners. (ii) Always use condoms during coitus. (iii) In case of doubt, go to a qualified doctor for early detection and get complete treatment if diagnosed with disease.	1  1	2										
6	a) Diagrammatic representation of a test cross. b) Definition: In a typical test cross an organism showing a dominant phenotype (and whose genotype is to be determined) is crossed with the recessive parent instead of self-crossing. The progenies of such a cross can easily be analysed to predict the genotype of the test organism.	1  1	2										
7	A- Inner cell mass- becomes embryo B- Trophoblast -- trophoblast layer gets attached to the endometrium	1 1	2										
8	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">A (Month)</th> <th style="width: 50%;">B (Changes in the embryo)</th> </tr> </thead> <tbody> <tr> <td>1<sup>st</sup> month</td> <td>Heart</td> </tr> <tr> <td>2<sup>nd</sup> month</td> <td>Limbs and digits</td> </tr> <tr> <td>3<sup>rd</sup> month</td> <td>Major organ system</td> </tr> <tr> <td>4<sup>th</sup> month</td> <td>Body covered with hair</td> </tr> </tbody> </table>	A (Month)	B (Changes in the embryo)	1 <sup>st</sup> month	Heart	2 <sup>nd</sup> month	Limbs and digits	3 <sup>rd</sup> month	Major organ system	4 <sup>th</sup> month	Body covered with hair	½ x 4	2
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9	a. ZIFT = Zygote Intra Fallopian Transfer b. ICSI = Intra Cytoplasmic Sperm Injection c. IUI = Intra Uterine Insemination d. ART = Assisted Reproductive Technology	½ x 4	2										



	<p>Natural methods</p> <p>Lacational amenorrhea Coitus interrupts</p>	<p>Barrier</p> <p>Condoms, Diaphragms, Vaults,</p>	<p>IUDs</p> <p>Copper-T LNG-20</p>	<p>Surgical</p> <p>Tubectomy, Vasectomy</p>			
16	<p>Phenotypic ratio : tall : dwarf = 3 : 1 Genotypic ratio : TT : Tt : tt = 1 : 2 : 1</p> <p><b>Law of Dominance:</b>  (i) Characters are controlled by discrete units called factors.  (ii) Factors occur in pairs.  (iii) In a dissimilar pair of factors one member of the pair dominates (dominant) the other (recessive).  <b>Law of Segregation:</b> This law is based on the fact that the alleles do not show any blending and that both the characters are recovered as such in the F<sub>2</sub> generation though one of these is not seen at the F<sub>1</sub> stage. Though the parents contain two alleles during gamete formation, the factors or alleles of a pair segregate from each other such that a gamete receives only one of the two factors.</p>			1		3	1 1
17	Seminiferous tubules → Rete testis → vasa efferentia → epididymis → vas deference → urethra → vagina. (any six)				½ x 6	3	
18	a) A rapid decline in death rate, maternal mortality rate (MMR) and infant mortality rate (IMR) as well as an increase in number of people in reproducible age. b) RCH and family planning				2 1	3	