ZOOLOGY

Answer Key

<table>
<tr><th>QUESTION NUMBER</th><th>ANSWER KEY</th><th>SCORE DETAILS</th><th>TOTAL SCORE</th></tr>
<tr><td>1</td><td>44 + xo</td><td>1</td><td>1</td></tr>
<tr><td>2</td><td>Sertoli cells</td><td>1

1</td><td></td></tr>
<tr><td>3</td><td>Ampullary isthmic junction</td><td>1</td><td>1</td></tr>
<tr><td>4</td><td>a) Amniocentesis
b) To prevent female foeticide</td><td>1
1</td><td>2</td></tr>
<tr><td>5</td><td>.a) Gonorrhoea, /genital herpes, /chlamydiasis/, 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.</td><td>1

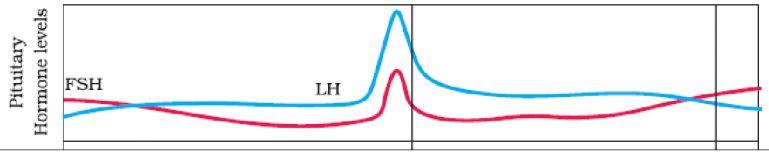
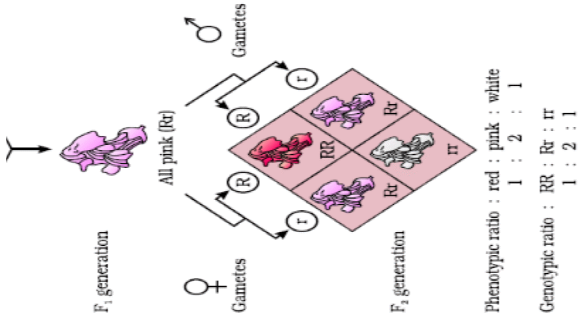
1</td><td>2</td></tr>
<tr><td>6</td><td>a) Diagrammatic representation of a test cross.
b) Definition: In a typical test cross an organism showing a dominant phenotype (and whose genotype is to be determined) is crossed with the recessive parent instead of self-crossing. The progenies of such a cross can easily be analysed to predict the genotype of the test organism.</td><td>1

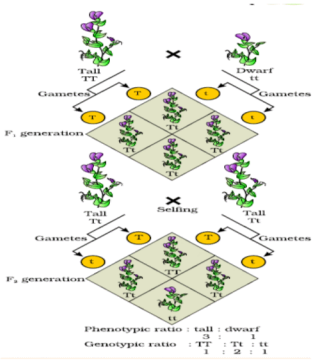
1</td><td>2</td></tr>
<tr><td>7</td><td>A-Inner ell mass- becomes embryo
B- Trophoblast -- trophoblast layer getsattached to the endometrium</td><td>1
1</td><td>2</td></tr>
<tr><td>8</td><td><table><tr><th>A (Month)</th><th>B (Changes in the embryo)</th></tr><tr><td>1st month</td><td>Heart</td></tr><tr><td>2nd month</td><td>Limbs and digits</td></tr><tr><td>3rd month</td><td>Major organ system</td></tr><tr><td>4th month</td><td>Body covered with hair</td></tr></table></td><td>½ x 4</td><td>2</td></tr>
<tr><td>9</td><td>a. ZIFT = Zygote Intra Fallopian Transfer

b. ICSI = Intra Cytoplasmic Sperm Injection

c. IUI =Intra Uterine Insemination

d. ART = Assisted Reproductive Technology</td><td>½ x 4</td><td>2</td></tr>
</table>

10		**1** **1**	**2**
11	The milk produced during the initial few days of lactation is called **colostrum** which contains several antibodies absolutely essential to develop resistance for the new-born babies.	**2**	**2**
12	ABO blood groups are controlled by the gene *I*. The plasma membrane of the red blood cells has sugar polymers that protrude from its surface and the kind of sugar is controlled by the gene. The gene (*I*) has three alleles *IA*, *IB* and *i*. The alleles *IA* and *IB* produce a slightly different form of the sugar while allele *i*does not produce any sugar. Based on these, A, B, AB, O blood grouping is done. When IA and IB are present together they both express their own types of sugars: this is because of co-dominance.	**3**	**3**
13	Incomplete dominance. 	**1** **2**	**3**
14	An analysis of traits in a several of generations of a family is called the pedigree analysis. a) affected b) mating c) consanguineous mating	**1 ½** **1 ½**	**3**
15		**3**	**3**

	Natural methods Lacational amenorrhea Coitus interrupts	Barrier Condoms, Diaphragms, Vaults,	IUDs Copper-T LNG-20	Surgical Tubectomy, Vasectomy			
16	 **Law of Dominance:** (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). **Law of Segregation:** 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 F2 generation though one of these is not seen at the F1 stage. Though the parents contain two alleles during gamete formation, the factors or alleles of a pair segregatefrom each other such that a gamete receives only one of the two factors.				**1** **1** **1**	**3**	
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) aswell as an increase in number of people in reproducible age. b) RCH and family planning				**2** **1**	**3**	