15. Name the functions of the following:
(a) Corpus luteum
(b) Endometrium
(c) Acrosome
(d) Sperm tail
(e) Fimbriae
Ans:
(a) Corpus luteum: The corpus luteum secretes large amounts of progesterone which is essential for maintenance of the endometriuip.
(b) Endometrium is necessary for implantation of the fertilized ovum and other events of pregnancy.
(c) The acrosome is filled with enzymes that help during fertilization of the ovum.
(d) Sperm tail: Tail facilitates sperm motility which is essential for fertilization.
(e) Fimbriae: Fimbriae help in collection of the ovum after ovulation.

16. Identify True/False statements. Correct each false statement to make it true.
(a) Androgens are produced by Sertoli cells. (True/False)
(b) Spermatozoa get nutrition from sertoli cells. (True/False)
(c) Leydig cells are found in ovary. (True/ False)
(d) Leydig cells synthesize androgens. (True/ False)
(e) Oogenesis takes place in corpus luteum. (True/False)
(i) Menstrual cycle ceases during pregnancy. (True/False)
(g) Presence or absence of hymen is not a reliable indicator of virginity or sexual - experience. (True/False)
Ans:
(a) False, Androgens or male sex hormones (e.g, testosterone) are secreted by Leydig cells.
(b) True.
(c) False, Leydig cells are found in testis.
(d) True.
(e) False, Oogenesis takes place in ovary.
(f) True.
(g) True.

17. What is menstrual cycle? Which hormones regulate menstrual cycle?
Ans: Menstrual cycle is the cyclic change(itf'the reproductive tract of primate female. This period is marked by a characteristic event repeated almost every month (28 days with minor variation) in the form of a menstrual flow (i.e. shedding of the endometrium of the uterus with bleeding. It may be temporarily stopped only in pregnancy.
The hormones that regulates menstrual cycles are
(i) FSH (Follicle stimulating hormone),
(ii) LH (Luteinizing hormone),
(iii) Oestrogens,
(iv) Progesterone.

18. What is parturition? Which hormones are involved in induction of parturition?
Ans: The average duration of human pregnancy is about 9 months which is called gestation period. Vigorous contraction of the uterus

at the end of pregnancy causes expulsion/delivery of the foetus. This process of delivery of the foetus is called parturition.It is induced by hormone oxytocin which acts on the uterine muscle and causes stronger uterine contractions.

19. In our society the women are often blamed for giving birth to daughters. Can you explain why this is not correct?
Ans: The sex chromosome pattern in the human females is XX and that of male is XY. Therefore, all the haploid female gametes (ova) have the sex chromosome X, however, the haploid male gametes have either X or Y. Thus 50% of sperms carry the X-chromosome while the other 50% carry the Y-chromosome. After fusion of the male and female gametes, the zygote carries either XX or XY depending upon whether the sperm carrying X or Y fertilizes the ovum. The zygote carrying XX would be a female baby and XY would be a male baby. That is why it is correct to say that the sex of the baby is determined by the father.

20. How many eggs are released by a human ovary in a month? How many eggs do you think would have been released if the mother gave birth to identical twins? Would your answer change if the twins born were fraternal?
Ans: One egg is released by human ovary in a month. Identical twins: Identical twins are formed when a single fertilized egg splits into two genetically identical parts. The twins share the same DNA set, thus they may share many similar attributes. However, since physical appearance is influenced by environmental factors and not just genetics, identical twins can actually look very different. Fraternal twins: These twins are formed when two fertilized eggs are formed. The twins share the different DNA set, thus they may share different attributes (dizygotic embryo).

21. How many eggs do you think were released by the ovary of a female dog which gave birth to 6 puppies?
Ans: One oogonium produces one ovum and three polar bodies. The ovum is the actual female gamete. The polar bodies take no part in reproduction and hence, soon degenerate. In human beings, ovum is released from the ovary in the secondary oocyte stage. So, six ova (eggs), were released by ovary of a female dog which gave birth to 6 puppies.

********** END **********