

## Chapter End Test

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| Date : _____                         | <b>Biology</b>             | <b>BATCH</b> |
| Duration: 45 Min.<br>Max. Marks : 26 | Topic : Human Reproduction | <b>XII</b>   |

**Disclaimer:** This Chapter End Test is to be conducted after the chapter has been taught in a Studymate class. It has been designed to check whether a student has understood all concepts taught in class and memorised them, so the format of the paper and its questions may not reflect the same standard that appears in the actual board exam. It contains some easier questions that have a lesser chance of appearing on the board exam, but they form the foundation needed to answer difficult questions while one of its questions has appeared in NEET (UG) exam, as well. This test provides an early mid-course correction with an easier to medium difficulty level, on purpose.

**General instruction:**

1. This question paper consists of two sections.
2. Section A consists of 15 multiple choice questions.
3. The answer of MCQs has to done in separate OMR sheet.
4. Subjective section has 4 questions of 1, 2, 3 and 5 marks each.
5. Subjective questions have to be answered separately in answer sheets.
5. All questions are compulsory.

1. The function of Oxytocin is to help in  
(a) Child birth      (b) Growth      (c) Lactation      (d) Gametogenesis
2. Stem cells are present in  
(a) Granulosa layer of follicle      (b) Trophoblast of blastocyst  
(c) Endometriun of the uterus      (d) Inner cell mass of blastocyst
3. The layer of the ovum that prevents polyspermy in humans is  
(a) Corona radiata      (b) Perivitelline space      (c) Germ layers      (d) Zona Pellucida
4. LH surge occurs during which phase of the Menstrual cycle?  
(a) Menstrual phase  
(b) At the beginning of proliferative phase  
(c) Just before the end of the proliferative phase  
(d) At the middle of the cycle
5. Blastocyst of human is different from Morula in the  
(a) Presence of germ layers      (b) Presence of more yolk  
(c) Presence of Amniotic fluid      (d) Presence of cavity
6. The organ that develops after the first month in the foetus  
(a) Lungs      (b) Liver      (c) Kidney      (d) Heart
7. The part of the Fallopian tube closest to the ovary is  
(a) Ampulla      (b) Isthmus      (c) Infundibulum      (d) Cervix
8. The number of chromosome in mature gametes gets halved  
(a) During formation of first polar body  
(b) During formation of primary follicle body  
(c) During mitosis in the gametes  
(d) Division of secondary oocyte and secondary spermatocyte
9. Progesterone is secreted during  
(a) Follicular phase      (b) Menstrual phase      (c) Ovulatory phase      (d) Secretory phase

- 10.** Signals for parturition originates from  
(a) Ovary (b) Uterine muscles (c) Foetus (d) Umbilical cord
- 11.** Sertoli cells present between the germ cells in the testis can also be called as  
(a) Reproductive cells (b) Secretory cells  
(c) Nurse cells (d) Future spermatocytes
- 12.** Morulla consists of \_\_\_\_\_ blastomeres.  
(a) 16–32 (b) 8–16 (c) 32–48 (d) 36–48
- 13.** The reproductive events in humans include  
(i) Gestation (ii) Fertilization (iii) Gametogenesis (iv) Insemination  
(v) Implantation (vi) Parturition  
Choose the correct sequence of events  
(a) i, ii, iii, iv, v, vi (b) vi, v, iv, iii, ii, i (c) iv, iii, ii, i, v, vi (d) iii, iv, ii, v, i, vi
- 14.** Chorion in human being is responsible for the formation of  
(a) Umbilical cord (b) Amniotic fluid  
(c) Organs in the foetus (d) Placenta
- 15.** Which one of the following is initiated by secretions of trophoblast?  
(a) Cleavage (b) Gastrulation (c) Polyspermy (d) Implantation

**SECTION B**

- 1.** Explain the role of the inner and middle walls of the human's uterus. **[1]**
- 2.** Where are fimbriae present in human female reproductive system? Give their function. **[2]**
- 3.** (a) Differentiate between gametogenesis in human males and females on the basis of  
(i) time of initiation of the process.  
(ii) products formed at the end of the process  
(b) What do you understand by the term spermiation? **[2+1]**
- 4.** (a) How is the sperm able to penetrate the secondary oocyte?  
(b) Where exactly in the Fallopian tube does this occur?  
(c) What happens after the sperm penetrates the secondary oocyte?  
(d) Explain the events after fertilization upto morula stage. **[1+1+1+2]**



## Hints/Solutions to Chapter End Test

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### Section - A

1. (c) Lactation
2. (d) Inner cell mass of blastocyst
3. (d) Zona Pellucida
4. (d) At the middle of the cycle
5. (d) Presence of cavity
6. (d) Heart
7. (c) Infundibulum
8. (d) Division of secondary oocyte and secondary spermatocyte
9. (d) Secretory phase
10. (c) Foetus
11. (c) Nurse cells
12. (b) 8-16
13. (d) iii, iv, ii, v, i, vi
14. (d) Placenta
15. (d) Implantation

### Section - B

1. The inner layer endometrium undergoes cyclical changes during menstrual cycle while the middle layers myometrium exhibits strong contraction during delivery of the baby.
2. The edges of the infundibulum possess finger-like projections called fimbriae, which help in collection of the ovum after ovulation.
3. (a) (i) Gametogenesis in human males is initiated at puberty and in females it is initiated in the embryonic stage.  
(ii) Products formed at the end of gametogenesis in male is spermatozoa and products formed at the end of gametogenesis in female are haploid ovum and second polar body.  
(b) The release of the spermatozoa from the seminiferous tubules is by the process called spermiation.
4. (a) The acrosome of the sperm is filled with enzymes that help the sperm to penetrate the secondary oocyte.  
(b) Ampullary Isthmus junction  
(c) Penetration of sperm induces the completion of the meiotic division of the secondary oocyte. The second meiotic division is also unequal and results in the formation of a second polar body and a haploid ovum.  
(d) The haploid nucleus of the sperms and that of the ovum fuse together to form a diploid zygote. The mitotic division starts as the zygote moves through the isthmus of the oviduct called cleavage towards the uterus and forms 2, 4, 8, 16 daughter cells called blastomeres. The embryo with 8 to 16 blastomeres is called a morula.

