

## Cell Biology

1. In the male human at puberty, which is the cell that commences spermatogenesis under the direct influence of follicle stimulating hormone?

- A. Spermatozoan
- B. SPERMATID
- C. Secondary spermatocyte
- D. Primary Spermatocyte
- E. Spermatogonium**

2. Which of the following cells undergo mitosis?

- i. Type A Dark Spermatogonium
- ii. Type A Pale Spermatogonium
- iii. Type B Spermatogonium
- Iv. Primary Spermatocyte
- V. Secondary spermatocyte

A. I and ii

**B. I, ii and iii**

C. ii, iii and iv

D. Iii, iv and v

E. Iv and v only

3. Which of the following undergoes meiosis?

- i. Type A Dark Spermatogonium
- ii. Type A Pale Spermatogonium
- iii. Type B Spermatogonium
- Iv. Primary Spermatocyte
- V. Secondary spermatocyte

- A. I and ii
- B I, ii and iii
- C. ii, iii and iv
- D Iii,iv and v
- E iv and v only**

4. What is the gametogenic stem cell in the spermatogenic cell lineage

- A. Pale Type A Spermatozoa
- B. Dark Type A Spermatogonium**
- C. Type B Spermatogonium
- D. Primary spermatocyte

5. Which is the cell that undergoes spermiogenesis

- A. Spermatozoan
- B. Spermatid**
- C. Type B spermatogonium
- D. Type A Dark Spermatogonium

6. In humans, there are 23 chromosomes in a haploid cell. Which of the following spermatogenic cells are haploid?

- i. Spermatozoan
- ii. Spermatid
- iii. Secondary spermatocyte
- iv. Primary spematocyte
- v. Secondary spermatocyte

- A. i and ii
- B. i, ii and iii only**
- C. ii, iii and iv only
- D. I, ii iii and iv only
- E. iii, iv and v only

7. In humans, there are 46 chromosomes in a diploid cell. Which of the following spermatogenic cells are diploid?

- i. Sertoli
- ii. Type A Spermatogonium
- iii. Type B Spermatogonium
- iv Primary spermatocyte
- v. Secondary spermatocyte

- A. i and ii
- B. i, ii and iii only
- C ii, iii and iv only**
- D i, ii iii and iv only
- E iii, iv and v only

8. A cell undergoing the first meiotic division duplicates its DNA content to 4N. Which listed Spermatogenic cells has 4N DNA content?

- A. Type B Spermatogonium
- B. Primary Spermatocyte**
- C. Secondary Spermatocyte
- D. Spermatid
- E. Spermatozoan

9. What morphological type of neuron is found in the anterior(ventral) horn of the spinal cord?

- A. Unipolar
- B. Pseudopolar
- C. Bipolar
- D. Multipolar
- E. Multipolar**

10. The oligodendrocyte and the Schwann cell make myelin sheath. The former however differs from the latter in this way: It:

- A. Wraps around one segment of one axon
- B. Wraps around segments of several axons**

C. Envelopes entire neurons

D. Does not enclose entire neurons

11. What is the main purpose of having a blood-brain barrier?

A. Prevent loss of blood from brain tissue

B. Prevent microorganisms from entering blood tissue

**C. Protect neurons from harmful substances circulating in blood**

D. All of the above



