PART - A

1. Explain the structure of the cell membrane. Discuss in detail about passive and active transport of molecules across the membrane. (6+14=20)

2. Give an account of chromosomal sex determination. (20)

3. What is an operon? Give a detailed description of the lac operon. What is its significance? (2+14+4=20)

4. What is enzyme? Write in detail about mechanism of enzyme action with special reference to temperature and pH. Give a note on feed-back regulations of enzyme. (4+10+6=20)

PART - B

5. Give an account of urine formation in mammalian kidney. (20)

6. What are hormones? Explain the mechanism of action of steroid hormones. (2+18=20)

7. What is gastrulation? Describe the formation of the three germ layers in frog embryo giving suitable diagram. (3+12+5=20)

8. What is aging? What are the symptoms of aging? Describe the modern approaches to delay it. (2+10+8=20)