**WEEK 7 ASSIGNMENT 7**

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment.

1. Which stage in meiosis is characterized by the occurrence of crossing over between homologous chromosomes?  
   - Anaphase II  
   - Metaphase I  
   - Diakinesis  
   - Telophase
   
   Accepted Answers:
   - Anaphase II
   
2. Non-disjunction of chromosomes occurs due to the following causes:
   - Pro-mature segregation of sister chromatids
   - Non-maturation of chromatin material
   - Interphase being absent
   - Mis-segregation of homologous chromosomes
   
   Accepted Answers:
   - Mis-segregation of homologous chromosomes

3. The chromosomal number is reduced to half during:
   - Mitosis
   - Meiosis II
   - Mitotic division
   - Binary Fission
   
   Accepted Answers:
   - Meiosis II

4. Pick the correct sequential order of stages occurring in the Prophase I of Meiosis
   - Leptotene-Zygotene-Pachytene-Diakinesis
   - Leptotene-Zygotene-Pachytene-Diakinesis
   - Leptotene-Pachytene-Zygotene-Diakinesis
   - Leptotene-Pachytene-Zygotene-Diakinesis
   
   Accepted Answers:
   - Leptotene-Zygotene-Pachytene-Diakinesis

5. Which of the following statements regarding the role of condensin complex in chromosome structural maintenance?
   - The complex tetramer DNA replays between sister chromatids to generate loops that compact DNA
   - The complex tetramer DNA replays between chromatids to generate loops that compact DNA
   - The complex tetramer DNA replays between chromatids to generate loops that compact DNA
   - The complex tetramer DNA replays between chromatids to generate loops that compact DNA
   
   Accepted Answers:
   - The complex tetramer DNA replays between chromatids to generate loops that compact DNA

6. How many condensin molecular acts on the loop extension of DNA, according to the double tetramer DNA assembly?
   - None
   - One
   - Two
   - Three
   
   Accepted Answers:
   - Two

7. Pick out the wrong statement about SMC protein complexes
   - Long and flexible
   - Conserved in all life forms except prokaryotes
   - The SMC proteins have coiled coil regions
   - The SMC complexes have ATPase domains

   Accepted Answers:
   - Conserved in all life forms except prokaryotes

8. Pick the correct order of steps in performing the SC technique
   - Crosslink-Restriction digestion of chromatin-Ligase-Purified pair ends reads
   - Crosslink-Ligation-Restraction digestion of chromatin-Purified pair ends reads
   - Crosslink-Ligation-Restraction digestion of chromatin-Purified pair ends reads
   - Crosslink-Ligation-Restraction digestion of chromatin-Purified pair ends reads

   Accepted Answers:
   - Crosslink-Ligation-Restraction digestion of chromatin-Ligase-Purified pair ends reads

9. Which of the following has no effect on gene expression?
   - Chromosomal position
   - Sub-nuclear localization
   -SITE specification
   - None of the above

   Accepted Answers:
   - SITE specification

10. Which of the following are synthesized in the nucleolus?
    - rRNA
    - tRNA
    - Heat shock proteins
    - All of the above

   Accepted Answers:
   - All of the above

- **Due on 2021-04-07, 23:59 IST.**