Assignment 2

The due date for submitting this assignment is passed.
As per our records you have not submitted this assignment.

1) What was the conclusion of Drosophila experiment that support the germ plasm theory?
   - Chromosome carry the genes located in the germ cells.
   - Chromosome fragmentation during division is observed in somatic cells but not in germ cells.
   - Chromosome fragmentation during division is observed in all kinds of cells.
   - Abnormal development of cells is due to fertilization by eggs of drosophila.
   - None of the above 1 point
   
   Instructor: 1 point
   Accepted Answers:
   - John S. Gershon
   - Keith Potter
   - Robert Brigg and Thomas King
   - Lee Whitfield

2) Experiments by which one of the following scientist(s) provide evidence that nuclei of differentiated cells are capable of generating all types of cells?
   - John S. Gershon 1 point
   - Accepted Answers:
   - John S. Gershon
   - John S. Gershon

3) Difference in phenotype observed in somatic clones is due to:
   - Random inactivation of X-chromosome
   - Environmental conditions
   - Spontaneous mutation
   - Both A and B 1 point

   Instructor: 1 point
   Accepted Answers:
   - Both A and B
   - Both A and B

4) The two families of proteins that maintain the memory of transcriptional state throughout adulthood are ______ and _______.
   - 0.5 points
   
   Instructor: 0.5 points
   Accepted Answers:
   - unknown
   - unknown

5) Choose the correct statement: 1 point
   - Poly A tail is removed from the recent transcript of mRNA before translation initiation.
   - Phosphorylation of residues at the C-terminal domain of RNA polymerase III is a key regulator of the transcriptional process.
   - DNA methylation is involved in the initiation of transcription.
   - All of the above 1 point

   Instructor: 1 point
   Accepted Answers:
   - All of the above
   - All of the above

6) Mutagenesis using transposable elements is employed in:
   - Enhancer trap
   - Oligonucleotide assay
   - Reduce protection assay
   - Gel shift assay 1 point

   Instructor: 1 point
   Accepted Answers:
   - Enhancer trap
   - Enhancer trap

7) Which of the following is a consequence of enhancer?
   - They control efficiency and rate of transcription.
   - They regulate temporal and tissue-specific expression.
   - They bind specific transcription factors.
   - All of the above 1 point

   Instructor: 1 point
   Accepted Answers:
   - All of the above
   - All of the above

8) DNA regulatory elements that actively repress the transcription of a gene are _______, while the boundaries of gene expression are set by DNA sequences called _______. 1 point

   Instructor: 1 point
   Accepted Answers:
   - DNA regulatory elements
   - Gene boundaries

9) DNA methyltransferase I recognizes _______ strand of DNA 1 point
   - Accepted Answers:
   - DNA methyltransferase I recognizes strand of DNA

10) 0.5 points

11) 0.5 points

12) 0.5 points