

	<p style="text-align: center;">BCMSCHOOL BASANT AVENUE, DUGRI LUDHIANA</p> <p style="text-align: center;">XII ASSIGNMENT</p> <p style="text-align: center;">BIOLOGY</p>	
1	Who postulated an adapter molecule to link the genetic code and the amino acids? State its two functions.	
2	<p>(i) What are the four levels at which gene expression is regulated in eukaryotic cell ?</p> <p>(ii) Name the regulatory gene of Lac –operon .</p>	
3	Why does hnRNA undergo splicing? Where does splicing occur in the cell?	
4	If the base adenine constitutes 31% of an isolated DNA fragment, then what is the expected percentage of the base cytosine in it?	
5	<p>i) Why does DNA replication occur in small replication forks and not in its entire length?</p> <p>(ii) Why is DNA replication continuous and discontinuous in a replication fork?</p> <p>(iii) State the importance of origin of replication in a replication fork.</p>	
6	<p>Answer the following questions based on Hershey and Chase’s experiments</p> <p>(i) Name the kind of virus they worked with and why?</p> <p>(ii) Why did they use two types of culture media to grow viruses in? Explain.</p> <p>(iii) What was the need for using a blender and later a centrifuge during their experiments?</p> <p>(iv) State the conclusion drawn by them after the experiments.</p>	
7	List the criteria of a molecule that can act as genetic material must fulfil. Which one of the criteria is best fulfilled by DNA or by RNA thus making one of them a better genetic material than the other?	
8	<p>Study the flowchart given below and answer the questions that follows</p> <p>I. S-strain → into mice → mice die</p> <p>II. R-strain → into mice → mice live</p> <p>III. Heat-killed S-strain + Live R-strain → into mice → A</p> <p>IV. Heat-killed S-strain + DNase + Live R-strain → into mice → B</p> <p>(i) Name the organism and differentiate between its two strains S and R, respectively.</p> <p>(ii) Write the result A and B obtained in step III and IV, respectively.</p> <p>(iii) Name the scientist who performed the steps I, II and III.</p> <p>(iv) Write the specific conclusion drawn from the step IV.</p>	