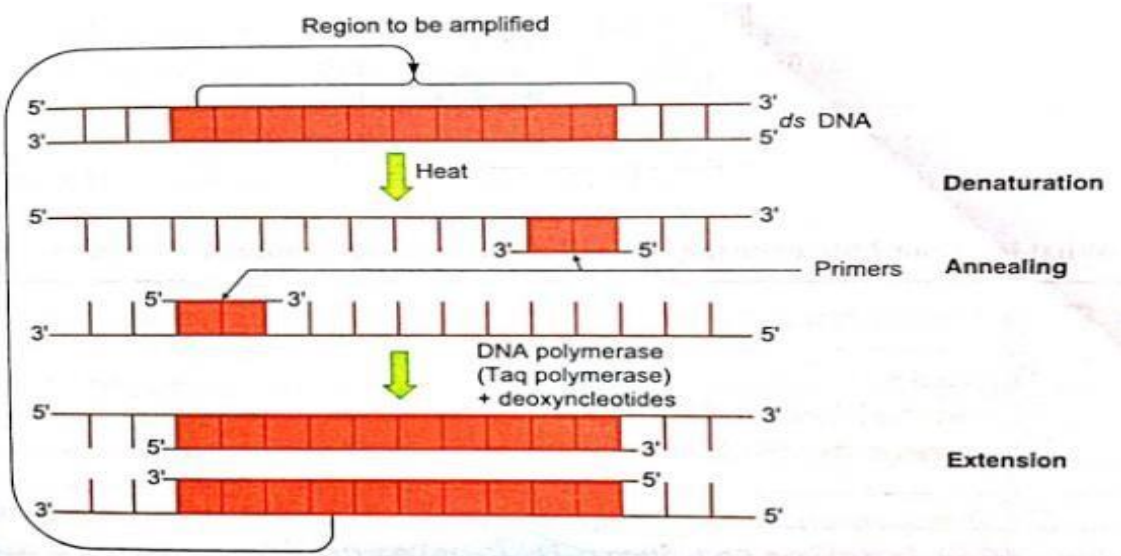


	<p>BCM SCHOOL BASANT AVENUE, DUGRI LUDHIANA  XII BIOLOGY  ASSIGNMENT ANSWER KEY</p>
1	a.960
2	d. Soil Sample C
3	C
4	<p>a. In case of allergy, IgE antibodies are involved. Histamine and serotonin are responsible for such responses.  b. Antihistamine could be given for immediate relief</p>
5	<p>a.Real Time-Polymerase Chain Reaction / Reverse Transcriptase- Polymerase ChainReaction  b.Denaturation by heating /DNA strands are separated by heating, annealing of two primers to complementary region of DNA/ Joining of primer to complementary region of DNA, Extension of primers, using thermostable DNA Polymerase or Taq Polymerase.  (The process is repeated many times/amplification)</p>  <p>The diagram illustrates the three stages of PCR: <ul style="list-style-type: none"> <li><b>Denaturation:</b> A double-stranded DNA (ds DNA) molecule is heated, causing the two strands to separate.</li> <li><b>Annealing:</b> Short DNA primers bind to the single-stranded DNA.</li> <li><b>Extension:</b> DNA polymerase (Taq polymerase) and deoxynucleotides are added to the primers to synthesize new DNA strands.</li> </ul> </p>
6	<p>a.a is exponential growth curve or J-shaped curve.  b is logistic growth curve or S-shaped curve.  b.Logistic growth curve (b) is considered more realistic because unlimited resources are never available in an ecosystem or in a habitat.  K stands for carrying capacity.</p>
7	<p>a.Earlier, insulin was extracted from pancreas of slaughtered cattle and pig. This insulin is not in use as some patients developed allergic reaction to this foreign protein.  b.Eli Lilly used the following procedure for insulin synthesis: <ol style="list-style-type: none"> <li>Two DNA sequences corresponding to A and B chains of insulin were prepared.</li> <li>These sequences were then introduced in plasmids of E. coli.</li> <li>The two insulin chains are produced separately.</li> <li>The two chains are extracted and combined by creating disulphide bonds to form the assembled mature molecule of insulin.</li> </ol> The pro-hormone produced in the human body has an extra stretch of C-peptide.</p>