

BIOTECHNOLOGY

- Chemical synthesis of DNA was devised by- H. G. Khorana
- Most commonly used type of restriction enzymes are of- Type II
- Major complement component present in serum is- C₃
- PCR technique was developed by – Kary. B. Mullis
- Major DNA polymerase involved in replication in prokaryotes is- DNAP III
- Most abundant polysaccharide among living system- Cellulose
- Recombinant DNA technology developed by – Cohen and Boyer
- No: of asymmetrical carbon atoms in Ribulose- 2
- Semi-conservative replication of DNA was proved by- Meselson and Stahl
- Protein part of an enzyme is termed as- Apoenzyme
- During replication, the enzyme that prevents torsion by breaking DNA strands- Topoisomerase.
- Eukaryotic DNAP for mitochondrial DNA replication is- DNAP-gamma.
- Monoclonal antibody technique developed by- Kohler and Milstein
- The most stable form of DNA and RNA seen under physiological condition is- B-DNA and A-RNA respectively
- Type II restriction enzymes were discovered by – Hamilton Smith (1970)
- In prokaryotes, the DNA polymerase having 5'-3' exonuclease activity- DNAP I.
- Concept of Transformation was proved by- Griffith
- During replication of DNA the separation of double strands is done by- Helicases.
- DNA replication takes place from 5'-3' direction.
- Cracking of genetic code was performed by- Nirenberg and Mathaei.

- Nucleotide sequence within a gene that is transcribed into RNA but excised before translation is called- Introns.
- Jumping genes or transposons were first reported by – Barbara McClintock.
- One gene-One Enzyme hypothesis was proposed by- Beadle and Tatum.
- Operon concept was proposed by- Jacob and Monod.
- The major form of super coiling found in chromatin is- Solenoidal.
- Phenomenon of Conjugation was put forth by- Lederberg and Tatum.
- Histones are rich in amino acids arginine and lysine.
- Wobble hypothesis was proposed by- Francis Crick
- Bacterial DNA is compacted in a structure called- Nucleoid.
- Transfer RNA is produced by - RNAPolymerase III.
- Chemical method of DNA sequencing was developed by- Maxam and Gilbert.
- ‘Molecular beacons’ are probes used in detection system for - Real Time PCR.
- Reverse transcriptase was first discovered by- Temin and Baltimore.
- The enzyme employed for amplification of specific genes in PCR technique is- *Taq* DNA polymerase.
- In Agarose gel electrophoresis, the movement of proteins is based on- Charge:Mass ratio.
- Phenomenon of transduction was proposed by- Zinder and Lederberg.
- The medium used for selecting myeloma cells in hybridoma technology is- HAT medium.
- Amino acid that does not exhibit optical activity is- Glycine.
- In nucleotides, both types of pentoses are in beta-furanose form.
- In alkaline conditions, RNA is rapidly hydrolyzed due to the presence of 2’-OH group.
- Hinge region of IgG is rich in - Proline.
- Imidazole group is present in the amino acid- Histidine.
- In SDS-PAGE, the movement of proteins is based on- Mass.

- Separation of proteins in iso-electric focusing is based on- Isoelectric point of the particular protein.
- The reagent developed by Sanger to identify the amino terminal amino acid is- 1-fluoro-2,4- Dinitrobenzene.
- 'Beta turn' is a secondary structure of protein.
- The most abundant amino acid present in collagen is- Glycine.
- Hershey and Chase first reported that DNA is the genetic material.
- In reversible competitive inhibition of an enzymatic reaction, Vmax remains same but Km increases.
- Co-factor for Glutathione peroxidase is – Selenium.
- In Agarose gel electrophoresis the DNA is visualized using- Ethidium bromide.
- Megaloblastic anemia often occurs due to deficiency of -Folic acid.
- The prosthetic group present in amino transferases is- Pyridoxal phosphate.
- Reverse transcriptases are present in – Retroviruses and Hepadna viruses.
- A diploid cell line of human origin is- HeLa.
- Vero cell lines are obtained from -African green monkey.
- Cell lines are commonly preserved in- Liquid Nitrogen.
- Viruses commonly used for production of vector vaccines are- Fowl pox virus, Retrovirus and Herpesvirus.
- Size of a prokaryotic cell generally ranges from- 1-10 microns.

Courtesy:

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