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Diploma in Pharmacy 2nd Year
Biochemistry & Clinical Pathology
Important Questions
Chapter 11 : Introduction to Biotechnology

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Chapter 11
Introduction to Biotechnology
IMPORTANT Questions

Q1. Describe DNA Technology ?

Ans.

DNA Technology

- → DNA technology is the use of various methods to manipulate, analyze, and modify DNA (deoxyribonucleic acid), which is the genetic material that carries the instructions for the development and function of all living organisms.
- → DNA technology has revolutionized many fields of biology, including genetic engineering, molecular biology, and biotechnology.
- → One of the most common uses of DNA technology is genetic engineering, which involves the manipulation of an organism's DNA to add, delete, or modify specific genes.
- → This technology has allowed scientists to create genetically modified organisms (GMOs) with desired traits, such as resistance to pests, increased yield, or improved nutritional content.

Examples of DNA technologies:

- DNA cloning
- Polymerase chain reaction (PCR)
- Gel electrophoresis
- DNA sequencing

Q2. Define term

Medical Biotechnology
Agriculture Biotechnology
Industrial Biotechnology
Marine Biotechnology

Ans.

- ➢ **Medical biotechnology :** It is used for medicinal purpose for example gene therapy is used to treat genetic or acquired disease like cancer this therapy utilizes normal genes for replacing the defective gene.
- ➢ **Agriculture biotechnology :** This is related to agriculture product and processes for example one or two genes are combined together and developed a new variety of crop for increasing the yield.
- ➢ **Industrial biotechnology:** This is related to industrial process for example replacing genes of a microorganism a new organism id developed to produce a useful chemical.
- ➢ **Marine biotechnology :** This field involve in Marine resources to develop a novel pharmaceutical , drugs , chemicals products , enzymes or other industrial product.