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Assignment for viva....

Q:1 What is PCR? Explain the procedure and uses of PCR?

Ans:1Polymerase chain reaction is a method widely used to rapidly make millions to billions of copies of a specific DNA sample, allowing scientists to take a very small sample of DNA .

Uses

PCR is **used** in molecular biology to make many copies of (amplify) small sections of DNA[?] or a gene[?]. Using **PCR** it is possible to generate thousands to millions of copies of a particular section of DNA from a very small amount of DNA. **PCR** is a common tool **used** in medical and biological research labs.

Procedure of PCR.

A standard polymerase chain reaction (PCR) setup consists of four steps:

- Add required reagents or mastermix and template to **PCR** tubes.
- Mix and centrifuge. ...
- Amplify per thermo cycler and primer parameters.
- Evaluate amplified DNA by agarose gel electrophoresis followed by ethidium bromide staining.

Q:2 Explain the Process of agarose and electrophoresis?

Ans:2 **Agarose gel electrophoresis** is a method of **gel electrophoresis** used in biochemistry, molecular biology, genetics, and clinical chemistry to separate a mixed population of macromolecules such as DNA or proteins in a matrix of **agarose**, one of the two main components of agar.

Gel electrophoresis is a procedure used to separate biological molecules by size. The separation of these molecules is achieved by placing them in a gel with small pores and creating an electric field across the gel. The molecules will move faster or slower based on their size and electric charge.

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