**SARDAR BHAGWAN SINGH UNIVERSITY, BALAWALA, DEHRADUN**

**Session: 2019 – 2020**

**ASSIGNMENT 8**

**School / Department** : Biotechnology and Biochemistry

**Name of Course and Semester :** B.Sc. Biotech 6th Sem

**:Subject :**Animal Biotechnology  **Code :** DSEBt-02

**Question 1) Fill in the blanks :**

1. Polymerase chain reaction (PCR) was developed by ………
2. ………….of the amplified product is commonly employed after amplification in a PCR.
3. **Taqman Probe** bear a reporter dye, often ………….at its 5’ end and a quencher ……….. attached to the 3’ end of the oligonucleotide
4. ELIZA stands for ………….
5. A ……. is a diagnostic device used to investigate the concentration and presence of a specific substance in a biological sample.

**Question 2) Answer the following questions briefly:**

1. What are the different components of a PCR?
2. How can you calculate the Annealing and the Melting temperature for a given primer sequence?
3. What is the difference between PCR, Real time PCR and Reverse transcription PCR.
4. Write about the two different markers used in Real Time PCR.
5. What is the difference between Indirect, Sandwich and Competitive ELISA?
6. What are the 5 basic components of a biosensor?
7. Give two examples of Biosenors used for Disease diagnosis in animals?

**Question 3)** Explain in detail how with the help of ELISA technique you can do early disease diagnosis of Foot and Mouth disease in Animals.

**Question 4)** Explain in detail how with the help of PCR technique you can do early disease diagnosis of disease in Animals.