2020-2021 Genetic PT

1. Please explain the difference between Limit of Detection (LOD) and Limit of Quantification (LOQ).

2. Please explain the difference between robustness and ruggedness.

3. Name two categories of Genetic Purity Testing methods.

4. Common protein electrophoresis methods include Starch Gels, _____, and Polyacrylamide Gels (PAGE).

5. In iso-electric focusing, the proteins separate based on their _____.

6. What does SNP stand for?

7. Name two advantages and two disadvantages of SNPs.

8. Electrophoresis requires what basic equipment or supplies? Please name three.

9. Why is genetic purity important for seed production?

10. What are co-dominant alleles and dominant alleles?

11. In PCR testing, explain what the Plateau Effect is.

12. In PCR, the buffer used often contains _____ ions.

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13. The four DNA bases are:
    a. Adenine, Guanine, Thymine, and Cytosine
    b. Cytosine, Ribose, Thymine, and Adenine
    c. Guanine, Adenine, Cytosine, and Thymine
    d. Uracil, Thymine, Adenine, and Guanine

14. DNA is made up of what three components?

15. In PCR testing traited corn, what are the two most common assays used?

16. Name one thing that would cause your PCR to have no end product.

17. What kind of bonds hold the base pairs together in DNA?

18. "A high temperature is used to break double stranded DNA into single strands". This is called _____.

19. When extracting genetic material for GMO detection in seed, what is the largest target material?
    a. Plasmid DNA
    b. Genomic DNA
    c. Ribosonal DNA
    d. cDNA

20. In genetic purity testing, what is the difference between an outcross and an off type in a hybrid sample?