

Molecular Testing Discussion Questions

- 1. What is reverse transcription?**
- 2. What is recombinant DNA?**
- 3. What tools can be used for molecular cloning?**
- 4. What is a vector and what is the most commonly used vector?**
- 5. What is gel electrophoresis and how is it used in relation to vectors?**
- 6. What is a restriction endonuclease?**
- 7. What is restriction enzyme mapping and restriction fragment length polymorphisms (RFLPs)?**
- 8. What is a recombinant protein?**

9. List some recombinant proteins that are used in transfusion medicine.

10. What is polymerase chain reaction (PCR)?

11. Explain the materials needed and steps in PCR.

12. Describe the process of DNA sequencing.

13. What is the difference between a dNTP and ddNTP?

14. What methods can be used to detect nucleic acids and proteins?

15. What is nucleic acid hybridization?

16. What techniques use nucleic acid hybridization?

17. What is real time PCR?

18. What is reverse transcriptase PCR?

19. What viruses is reverse transcriptase PCR good at detecting early on?

20. What is transcription mediated amplification (TMA)?

21. What is the hybridization protection assay (HPA)?

22. What is nucleic acid testing (NAT)?

23. What is the Western Blot?

24. What infectious disease is confirmed using the western blot?

25. Describe three techniques that can be used to detect gene polymorphisms.

26. List situation where red blood cell genotyping may be performed.