

Name _____ Hour _____

Chapter 12-3 Directed Reading, PART 1
pgs. 300-302

1. What are genes and what do they control? _____

2. What is the first step in decoding the gene's genetic messages? _____

3. What information do RNA molecules contain information for making? _____

4. What are these three main differences between DNA and RNA?

Difference	DNA	RNA
Sugar		
# of strands		
Nitrogen Base		

5. What is RNA considered? _____
6. What does the ability to copy DNA's sequence into RNA make possible? _____

7. What is the main job of RNA molecules in most cells? _____
8. What does protein synthesis mean? _____
9. What are the three main types of RNA and what are their functions?

RNA TYPE			
FUNCTION			

10. What do most genes contain instructions for? _____
11. What happens in/on the ribosomes? _____
12. What are ribosomes made of? _____
13. How are RNA molecules produced? _____

14. What is the process of copying RNA from DNA called? _____
15. What enzyme is required for transcription to work? _____
16. In what organelle does transcription take place? (hint: It has to happen where the DNA is located) _____
17. In what organelle are the proteins made? _____
18. What are the regions of DNA that tell RNA polymerase where to start copying called?

19. Explain what is happening in fig. 12-14. _____

20. What are introns? _____
21. What are exons? _____
22. Why were exon given their name? _____
23. What gets copied from DNA when RNA is made, introns, exons or both? _____
24. Which are cut out? _____ Where does this take place? _____
25. Why do you think they are cut out? _____
26. What remains? _____ What happens to them? _____
_____ to form _____.
27. Why do you think they are not cut out? _____
28. What are two reasons scientists think cells would use energy to make a large RNA molecules only to throw parts of it away?
- a. _____

- b. _____
