Industrial Safety - Test # 6

Please turn test in on Saturday, Nov 5 at the end of class

Name _____

Textbook – Intro to Oil and Gas Operational Safety

Please write your answers on this page

Please read Chap 11 (Failure Modes) and 12 (Other Types of Failures)

1. True or False. A variety of steels, plastics and other materials are used in the oil and gas industry. Pg. 92
2. True or False. Tension is pulling apart. Pg. 92
3. True or False. Compression is forces pushing in to the material from both ends. Pg. 92
4. True or False. Forces in a crane wire picking up a load are compression. Pg. 92
5. True or False. A bending motion creates both tension and compression. Pg. 92
6. Describe ductile and give an example. Pg. 93

7. Define brittleness and give an example. Pg. 93

8. Define elasticity and give an example. Pg. 93

9. True or False. Stress is created when a load is applied to a material. Pg. 93
10. True or False. Stress occurs under normal operating conditions. Pg. 93
11. Define stress corrosion cracking. Pg. 94

12. Define thermal shock and give an example. Pg. 94

13. Define brittle fracture and give an example. Pg. 94

14. What is a “safe operating envelope” for a plant? Pg. 95

15. True or False. When a weld is being formed, chemical and metallurgical actions take place in the metal adjacent to the weld. Pg. 97

16. List 6 things that most weld failures can be attributed to. Pg. 97

17. True or False. A weld crack can occur due to poor welding techniques, poor equipment or porosity. Pg. 98
18. True or False. Wels porosity is the presence of heavy oil droplets within the weld. Pg. 98
19. True or False. The weld testing technique, NDT stands for “not done tomorrow”, because the weld has to cool enough to achieve its strength. Pg. 98
20. Describe ultrasonic weld flaw testing. Pg. 99

21. Describe dye penetrant weld testing. Pg. 99

22. Describe radiography weld testing. Pg. 99

Maximum test score is 100 points. Each question is 5 points