

## ASSIGNMENT – I (ULTRASONIC TESTING)

1. The general term for a local variation in material continuity is called \_\_\_\_\_ (discontinuity/Defect)
2. Where an unacceptable condition occurs in a material, due to local variations in material continuity the term given specifically to this is \_\_\_\_\_ (discontinuity/Defect)
3. Brittle fracture is most likely to occur at High temperatures (True/False)
4. An NDT Test is usually classified as \_\_\_\_\_ ( Direct/Indirect test)
5. Commonly found discontinuities in castings are \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ etc
6. A Hot tear is found in a Welding -True/False
7. A local variation in concentration of any of the constituent in an alloy is called \_\_\_\_\_
8. Which discontinuity can be avoided by avoiding abrupt changes in sections during casting process \_\_\_\_\_
9. Slag inclusion can be found in \_\_\_\_\_ SMAW/GTAW
10. Tungsten Inclusion is found in GTAW Process. True/False
11. Formula for calculating the wavelength is \_\_\_\_\_
12. What is the size of the smallest flaw that can be found in UT? \_\_\_\_\_
13. If wave length increases sensitivity - Increases/decreases
14. Sound Wave velocity changes when the medium changes - True/False
15. Air is Good Conductor of Ultrasonic sounds-True/False
16. Human Audible Range - \_\_\_\_\_
17. Generally used frequencies for Metal testing in UT are in the range of \_\_\_\_\_ to \_\_\_\_\_ MHz
18. Velocity of sound in steel when compared to water is \_\_\_\_\_
19. The Unit of frequency is Hertz(Hz) True/False
20. For a probe of 2MHz when used for testing of steel the smallest flaw that can be detected is \_\_\_\_\_ mm
21. The carbon percentage in Mild Steels is generally limited to \_\_\_\_\_
22. List the types of discontinuities that can be found in Welds \_\_\_\_\_
23. The difference between a discontinuity and defect is \_\_\_\_\_
24. Lack of fusion is a discontinuity that can found in a \_\_\_\_\_ (casting/forging/plate/weld)
25. In order to detect finer flaws we need to use \_\_\_\_\_ (Higher/lower) frequencies
26. Sound requires a \_\_\_\_\_ to get transmitted
27. Velocity of Ultrasonic sound in Steel is approximately \_\_\_\_\_ km/s
28. Cold shut is a type of discontinuity found is \_\_\_\_\_ (weld/plate/forging/casting)
29. Steel is an alloy of \_\_\_\_\_ + \_\_\_\_\_
30. Laminations can be generally found at \_\_\_\_\_ (1/2, 1/4, 1/8, 20%) of the thickness of the plate.

Ref: TINT/UT/A/0423/00