

EDDY CURRENT TESTING COURSE – ASSIGNMENT - I

1. Elements having 7 or 8 in electrons in the outermost shell are called _____
2. Eddy Current detects flaws on surface, subsurface and internal in nature. T/F
3. In order to perform eddy current testing the material must be a _____
4. The best electrically conducting material _____ (gold, silver, copper, platinum)
5. Electrical conductivity is measured in units of _____ in Eddy Current testing
6. The vector of Resistance and Inductive reactance is called _____
7. When all other parameters remain same, frequency increases inductive reactance _____ (decreases, increases, does not change)
8. What are the four laws/rules commonly applicable for eddy current inspection? _____
9. In a plain conductor, if the resistance is constant, Current is _____ (directly, inversely) proportional to voltage
10. Eddy Currents can be generated by both Alternating and Direct currents (T/F)
11. AC currents will have _____ effect, thus limiting their depth of penetration.
12. If the conductivity increases, the depth of eddy current penetration _____ (increases, decreases, does no effect)
13. Like Ultrasonic testing, Couplant is essentially required to perform eddy current testing (T/F).
14. Formula for Inductive reactance is $X_L =$ _____
15. Permeability means _____
16. Permeability of Ferro magnetic materials is from _____ to _____
17. Which of the materials are difficult to be tested in Eddy currents. (Dia, para, ferro magnetic)
18. A vector will have _____ and _____
19. The curve generated by the equipment from Air point to Zero lift off is called _____
20. Name any 5 industrial applications of eddy current testing _____
21. Temperature is NOT a variable that affects eddy current examination results. (T/F)
22. Permeability increases eddy current depth of penetration _____ (increases, decreases, remains constant)
23. Conductivity of Copper is _____ %IACS
24. Eddy current testing cannot be performed without contacting the surface. (F/T)
25. During in-service inspection, to perform the Eddy Current testing, paint shall be removed (T/F)
26. Abbreviate IACS _____
27. Eddy Currents seeks least path of resistance (T/F)
28. Formula to calculate electrical Impedance (Z) = _____
29. Usually good practice to set Lift off curve to _____ (vertical, horizontal, 45 Deg) before start scanning the material.
30. In eddy current testing, cracks and end/edge of the materials both can generate signals. (T/F)