

Engineering Chemistry

WorkSheet

Unit 5:Advanced Materials

1. Match the following
 - 1.Gypsum
 - 2.Tricalcium silicate
 - 3.Flash point of lubrication
 - 4.Triple point of water
 - 5.shape memory alloys
 - a. Regains shape on heating
 - b. Solids,liquids,gases
 - c. controls setting time of cement
 - d. lowest temperature at which vapour ignites
 - e. Early strength
2. Initial flash set of cement is caused by_____
3. The property of a liquid by virtue which resist to its own flow is called_____
4. The device that can report the presence of analytes using a bio molecular component is called _____
5. The degree of freedom $F=$ __
6. Major component of Portland cement_____
7. The point where three phases co exist in equilibrium is called_____
8. The lowest temperature at which lubricant gives off vapour is called_____
9. An analytic device that integrates a biological component with a electrochemical detector_____
10. Smart materials are also called as_____.
11. Vegetable oils are suitable for thin film lubrication T/F
12. The units of viscosity are stokes T/F
13. Initial setting of cement is due to hydration of aluminate T/F
14. Nintinol is a example for shape memory alloy T/F
15. The degree of freedom in Eutectic point is non variant T/F
16. The reduced phase rule is_____.
17. The coefficient of friction for thin film lubrication is
 - a) 0.1 to 0.2
 - b) 0.5 to 0.6
 - c) 0.05 to 0.15
 - d) 0.001 to 0.03
18. The variance of triple point in one component system

- a) Non variant
 - b) Univariant
 - c) Bivariant
 - d) Trivariant
19. The glucose sensor works by using
- a) Glucose oxidase
 - b) Hydrogen peroxide
 - c) Enzyme
 - d) Initiator
20. A region of a system that is uniform in chemical composition and physical state
- a) Phase
 - b) Component
 - c) Degree Of Freedom
 - d) Triple Point
21. Lubricant used for refrigerators in industries
- a) Low Pour Point
 - b) Low Cloud Point
 - c) Low Viscosity
 - d) All The Above
22. The materials that change their behaviour in a systematic manner as a response to external stimuli
- a) Engineering materials
 - b) Smart materials
 - c) Polymers
 - d) Active materials
23. For a good lubricant, Viscosity index should be
- a) High
 - b) Low
 - c) Normal
 - d) Unpredictable
24. The initial setting of cement is due to
- a) Hydration of Calcium

- b) Hydration of Aluminate
 - c) Hydration of Silicate
 - d) Hydration of Dicalcium
25. Pour point of a lubricant should be
- a) High
 - b) Low
 - c) High And Low
 - d) None Of The Above
26. The materials in which a large deformation can be induced and recovered through temperature changes
- a) Smart alloys
 - b) Piezoelectric materials
 - c) Shape memory alloys
 - d) Optical fibres