**Assignment 3**

Questions 1-6 are from the following table;

A vessel has the following ½-areas of water plane at the drafts given

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Draft (m) | 0.25 | 0.75 | 1.25 | 2.25 | 3.25 | 4.25 | 5.25 |
| ½ area  (m2) | 800 | 1600 | 2300 | 2600 | 2750 | 2800 | 2825 |

Below the 0.25 m there is an appendage volume 150 m3 Kb 0.2 m

1. The waterplane area at a draft of 3.25 m would be (in m2);
2. 6500 b)5500 c)2750 d)None of the above
3. The Simpson’s multiplier for draft 1.25 would be;
4. 4 b) 2 c)3/2 d)1/2
5. The Simpson’s multiplier for draft 4.25 would be;
6. 1 b)2 c)4 d)3
7. Functions of first moment of volume for the vessel is;
8. 36975 b)79275 c)88234 d) None of the above
9. Suppose a weight ‘w’ is shifted horizontally by a distance ‘d’. Shift in the center of gravity of the ship of displacement ‘W’ would be;
10.  b)  c) d/2 d) d
11. Center of floatation is the centroid of
12. Displacement b)underwater volume c)waterplane area d) sectional area
13. Transverse moment of inertia of a waterplane is taken about
14. Aft perpendicular b)Centerline c)Midship d) Longitudinal center of floatation
15. Longitudinal moment of inertia of a waterplane is taken about
16. Aft perpendicular b)Centerline c)keel d) Longitudinal center of bouyancy
17. Transverse moment of inertia is proportional to
18. Half breadth b) (Half breadth)2 c) (Half breadth)3 d) None of the above
19. Parallel sinkage of a ship by the adding of a weight can be calculated using
20. TPC b)MCTC c)LCB d) None of the above
21. A floating body trims about it’s
22. LCF b)LCB c)Midship d)LCG
23. In hydrostatic-curves, the y-axis usually represents
24. Length b) displacement c) draft d)moment
25. TPC is calculated as
26. Aw/100 b)  c)  d)None of the above
27. Moment required to change the trim by 1 cm is called
28. MCTC b) TPC c) sinkage d) moment of inertia
29. Barycentric axis is about the centre of
30. Buoyancy b) gravity c)floatation d) moments