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 (m^2)	800	1600	2300	2600	2750	2800	2825

Below the 0.25 m there is an appendage volume 150 m^3 Kb 0.2 m

1. The waterplane area at a draft of 3.25 m would be (in m^2);

a) 6500 b)5500 c)2750 d)None of the above

2. The Simpson's multiplier for draft 1.25 would be;

a) 4 b) 2 c)3/2 d)1/2

3. The Simpson's multiplier for draft 4.25 would be;

a) 1 b)2 c)4 d)3

4. Functions of first moment of volume for the vessel is;

a) 36975 b)79275 c)88234 d) None of the above

5. 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;

a) $\frac{w*d}{W}$ b) $\frac{W*d}{w}$ c) d/2 d) d

6. Center of floatation is the centroid of

a) Displacement b)underwater volume c)waterplane area d) sectional area

7. Transverse moment of inertia of a waterplane is taken about

a) Aft perpendicular b)Centerline c)Midship d) Longitudinal center of floatation

8. Longitudinal moment of inertia of a waterplane is taken about

a) Aft perpendicular b)Centerline c)keel d) Longitudinal center of bouyancy

9. Transverse moment of inertia is proportional to

a) Half breadth b) (Half breadth)^2 c) (Half breadth)^3 d) None of the above

10. Parallel sinkage of a ship by the adding of a weight can be calculated using

a) TPC b)MCTC c)LCB d) None of the above

11. A floating body trims about it's

a) LCF b)LCB c)Midship d)LCG

12. In hydrostatic-curves, the y-axis usually represents

a) Length b) displacement c) draft d)moment

13. TPC is calculated as

a) Aw/100 b) $\frac{A_w \rho_w}{100}$ c) $\frac{A_w \rho_w}{1000}$ d)None of the above

14. Moment required to change the trim by 1 cm is called

a) MCTC b) TPC c) sinkage d) moment of inertia

15. Barycentric axis is about the centre of

a) Buoyancy b) gravity c)floatation d) moments