

سازمان بنادر و دریانوردی

===== اداره کل امور دریانوردان =====

Exam Code : mss

تاریخ: 1392.03.08

نام آزمون: تعادل و ساختمان کشتی

زمان : ۲/۵ ساعت

درجه: فرمانده کمتر از ۳۰۰۰ - سفرهای نزدیک به ساحل

(Pass mark : 55)

Q.1) -

a) - A Box shaped vessel, $L=60\text{m}$, $B=10\text{m}$, draft= 5m on even keel, density= 1.025 ,
find **KB** and **BM**. (12M)

b) - If the FWA= 50mm , find the **TPC** of the vessel. (8M)

Q.2) - A Ship of 2000 tons displacement, has $KB=2.5\text{m}$, $KG=3.1\text{m}$, $KM=4.2\text{m}$ and is floating upright in salt water.

Find the **list** if a weight of 12 tons is shifted 18m transversely across the deck. (20M)

Q.3) - A Ship 100m long is floating at draft 4.50m FWD. and 5.05m AFT.

The center of flotation is 1.5m aft of amid ships. $TPC=10\text{ tons}$, $MCTC=120\text{ tons}$.

Find the new drafts if a total weight of 430 tons is loaded in a position 14m forward of amidships. (20M)

Q.4) – Draw midship cross section of a **double hull tanker** and name all the parts (20M)

Q.5) - Explain the procedures of **gas cutting**.

نحوه برش توسط گاز را توضیح دهید

(20M)