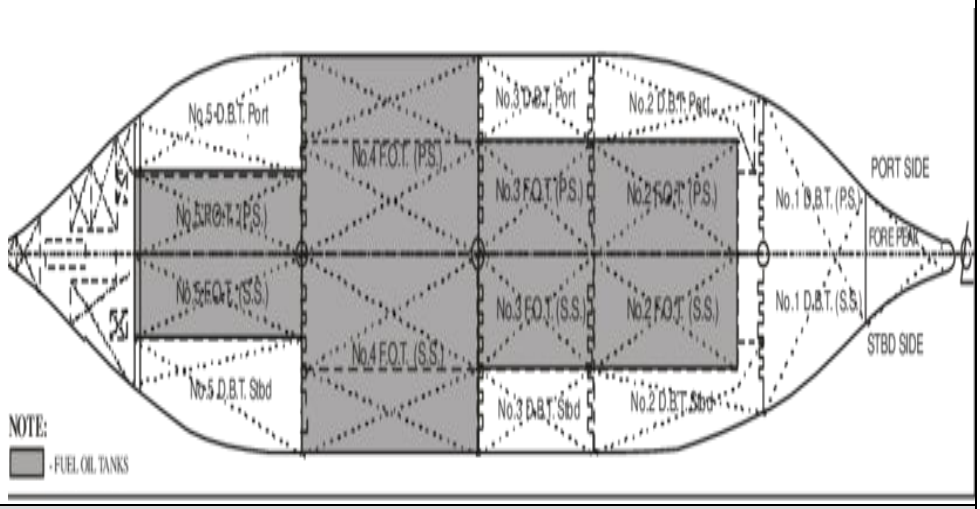
Exercise Plan Template
(Trainee's Copy)

Course Title	Management Level Course for Marine Engine Officers (Function 4)
Exercise No.	A7.1
Exercise Title	Applying the appropriate measure to maintain the stability and stress conditions within safety limits at all times during operation
Duration	1.5 hours
Function	Function 4 - Controlling the Operation of the Ship and Care for Persons on Board at the Management Level
Competence	Control trim, stability and stress
Knowledge, Understanding and proficiency	Understanding of fundamental principles of ship construction and the theories and factors affecting trim and stability and measures necessary to preserve trim and stability
Intended Learning Outcome/s	Upon completion of this topic, the trainees/participants should be able to apply the appropriate measure to maintain the stability and stress conditions within safety limits at all times during operation through a given scenario
Training Equipment	N/A
Scenario Description	A bulk carrier ship with no set schedule of loading at port received an instruction to bunker a very low sulfur fuel oil (VLSFO) on its next port of call at Singapore, five days prior to arrival. The instruction is to carry as much as possible VLSFO utilizing two fuel oil tanks, capable of five days continuous operation. The ship's average consumption is 20MT $\pm$ 2MT. Engine crew must prepare bunkering plan prior arrival at Singapore.

Initial Condition

The ship is in ballast condition with the following fuel oil tank capacity and content. All tank has 0.1MT unpumpable content

Tank	CAPACITY (M3)	ROB (MT)	Content
2P	500	0.1	VLSFO
2S	500	0.1	VLSFO
3P	500	400	MDO
3S	500	100	MDO
4P	1000	600	HFO
4S	1000	800	HFO
5P	500	50	HFO
5S	500	50	HFO
1DBT (PS)	200	100	BALLAST
1DBT (SS)	200	100	BALLAST
2DBT (PS)	200	100	BALLAST
2DBT (SS)	200	100	BALLAST
3DBT (PS)	200	100	BALLAST
3DBT (SS)	200	100	BALLAST
5DBT (PS)	200	100	BALLAST
5DBT (SS)	200	100	BALLAST



Exercise Procedure

Trainee's Action

Trainee should follow the instruction of the facilitator and participate to the following:

- Conduct Pre-Bunkering Checks
- Develop Bunkering Plan
- Determine Tank Capacities
- Calculate Fuel and Ballast Adjustments
- Distribute Fuel Load
- Equally distribute the fuel oil load among the tanks.
- Clearly identify the distribution of weights in the bunkering plan.

Date

Trainee's Name & Signature

Instructor's Name & Signature

Note: This sample practical Exercise Sheet was used during the conduct of pilot testing, MTI may enhance this taking into account the Resources they have.