

MERCHANT SHIPPING SECRETARIAT GOVERNMENT OF SRI LANKA

CERTIFICATE OF COMPETENCY EXAMINATION

GRADE

: MASTER ON SHIPS OF500 GT OR MORE (UNLIMITED)

SUBJECT

: GENERAL SHIP KNOWLEDGE Management

DATE

: 17.11.2023

Time allowed THREE hours ANSWER ALL QUESTIONS

Total marks

: 180

Pass marks

: 60%

Formulae and all intermediate steps taken in reaching your answer should be clearly shown. You may draw sketches wherever required. Electronic devices capable of storing and retrieving are **not** allowed.

- You are Master of a Cargo vessel. Explain in detail your initial actions and subsequent actions under following situations.
 - a) One day before departure from port 2nd mate has to be hospitalized for a long period. According to your safe manning certificate, you are required to have three watch keeping officers. As per crewing agency, it is impossible to find and arrange a 2nd mate in a very short time frame.

(10 marks)

b) During loading operation no. 1 crane crashed on to the tank top holing the tank top. During the incident a stevedore and one AB on duty were seriously injured.

(15 marks)

c) On arrival of a discharging port one AB has to be signed off and one AB has to be signed on.

(05 marks)

- 2) Answer the following questions with regard to salvage and towage:
 - a) Write short notes on international salvage convention

(05 marks)

b) Highlight the difference between towage and salvage

(05 marks)

c) A master of a vessel may occasionally face a situation where he has to decide on accepting a tow. Describe in detail the preparation and precautions that the master should take prior to accepting the towing vessel, during the towing operation and on completion of towing operation.

(20 marks)

3)	An	swer the	following	questions	s with 1	ega	ard to P	SC inspe	ections.		
	a)	a) Describe the objective of PSC inspections									
											(05 marks)
	b)	b) What is the usual procedure of selecting ships for PSC inspection?									(05 marks)
	c)	Describe the three types of PSC inspections								(05 marks)	
	0)									(10 marks)	
	d)	As per PSC inspection procedures what do you understand by the CLEAR for detailed inspection? Describe your answer with suitable examples								GROUNDS	
										(10 marks)	
4)	a)	Analyze the following deviations and determine the values of the approxi coefficients:								imate	
		N	NE	E	SE		S	SW	W	NW	
		80 W	30 E	7º E	6º E		80 E	70 E	30 W	12° E	
		o w	3 L	/ L	O L		O L	, 1	5 11	12 2	(05 marks)
	b) With the aid of sketches suggest your corrections to minimize above.										
										(05 marks)	
	c)	Illustrate in a sketch the basic construction of a magnetic compass bowl.									
										1	(04 marks)
	d) Explain on what occasions should a ship's magnetic compa									needs exar	nination and
		be adjus	sted.								(04 marks)
	e)										
	-,	Compass System (TMC).									
											(04 marks)
	f) Indicate in sketched curves, the deviations per its respective coefficie below:									oefficient a	as given
		COFF	= DEV								
			= DEV = $+ 2^0 E$								
			(-) 3 ⁰ W								
			(+) 2 ⁰ E								
			$= (-) 4^0 W$								
		E =	$(+) 4^{0} E$								
		(You m	nay reques	t for grap	h pape	r)					

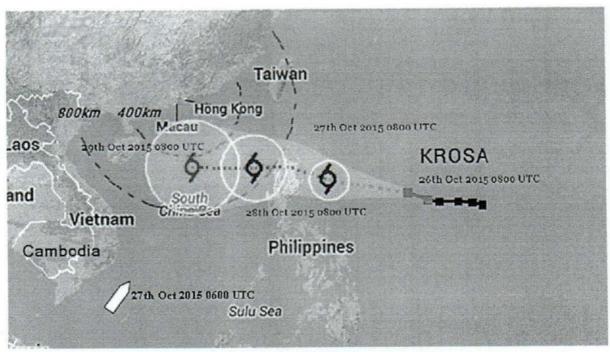
(08 marks)

5) You are the Master on a 2800 TEUs container vessel with Maximum draft of 12.1 m and on a passage from Sihanoukville, Cambodia to Taichung, Taiwan. Your Charterers request you to proceed at full speed to Taiwan to catch the berthing window on arrival as they are competing with another vessel. Delay in ETA may cause vessel to delay in berthing over 1 day. At present you are making 17 kts as per the instructions from Taichung, Charterer's Agent.

You received TRS (Krosa) warning on 26th October 2015, 0800 UTC with 72 hour forecast positions, moving westward.

On 27th October 2015 morning you observe that your vessel 1100 miles away from TRS, Krosa. TRS Krosa moving approximately at a speed of 15-16 kts.

Upon departure Sihanoukville vessel draft was 10.9 m and GM was 1.06 m.



 Evaluate and justify your actions with respect to probable movement of the Tropical cyclone.

(20 Marks)

b) Explain heavy weather precautions that you will adapt to improve the vessel's condition to withstand heavy weather situation.

(15 Marks)

c) Briefly explain Parametric rolling and Synchronous rolling due to heavy swell and your actions to overcome these dangerous situations.

(10 Marks)

d) On 30th October 2015, morning upon clearing heavy weather conditions, during inspection of container lashings Bosun reported that he observed IMDG container at Bay no. 6, is leaking due to heavy weather damage and some spillage on the deck. Explain your actions in detail.

(15 marks)