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**INDIAN MARITIME UNIVERSITY**  
 (A Central University Government of India)  
**END SEMESTER EXAMINATION-JUNE-JULY 2019**  
**DIPLOMA IN NAUTICAL SCIENCE**  
**SEMESTER-II**  
**CARGO HANDLING STOWAGE & SEAMANSHIP II**  
**(UD11T4203)**

**Date: 26.06.2019**  
**Time: 2 hours**

**Max.Marks: 70**  
**Pass Marks: 35**

Q. No. 1 is compulsory and any 3 other Questions from Section A;  
 Answer any 3 Questions from Section B;  
 All Questions carry equal marks;  
 Draw sketches wherever required

**PART-A**  
**Cargo Handling and stowage**

1. Choose the correct option, only one option is correct. (10)

Question	Ans1	Ans2	Ans3	Ans4
(a) what is the use of inerting in a tanker	to prevent fire and explosion	to prevent corrosion of tank coating	all the above	to prevent corrosion of tank
(b) bitter end	large shackle which joins the anchor to the anchor chain	about 30 metres in length, generally about 10 shackle lengths on each anchor chain	the inboard end of anchor chain secured on top of chain locker	anchor ready for letting go
(c) what does ESD stand for	emergency safety devices	emergency shut down	emergency stop discharge	emergency security device
(d) name the type of pumps used on a tanker	centrifugal pump, eductors	reciprocating pump, screw pump	gear pump, deep well pump	all the above
(e) one dimension of containers remains constant	height	length	breadth	cubic capacity

(f) Containers can carry	break-bulk including oversize & heavy lifts	bulk cargo	liquid cargo	all the above
(g) Locking arrangements, Seal	bolt type combined lock & seal	adhesive plastic seal	padlock with 5 keys	all the above
(h) Angle of Repose of bulk cargoes	the steepest angle of descent or dip relative to the horizontal plane to which a material can be piled without sliding	is a moisture content, reported in gross water content by weight	calculated as 90 per cent of the Flow Moisture Point	Angle obtained when repositioning cargo
(i) payload is equal to	rating minus tare mass	rating + tare mass	cubic capacity	all the above
(j) Hatch cover operation and testing for weather tightness	steel hatch covers to be inspected and operated without any leakages	rubber packing to be inspected, renewed if needed	after battening down, hose test to be carried out	all the above

2. Write short notes on the following:

- a) Centrifugal Pump (5)  
 b) Explosimeter (5)  
 3. a) Draw and name the parts of a standard container. (5)  
 b) Explain the bay plan in a container ship. (5)  
 4. a) Explain briefly the types of bulk Cargoes. (5)  
 b) Describe how you will test a hatch cover for weather tightness. (5)  
 5. a) Explain emergency shut down system on tankers. (5)  
 b) Enumerate the contents of the Cargo Securing manual. (5)

#### PART-B

#### Seamanship theory and SWP (any 3 out of four)

6. a) Explain the use of various types of slings. (5)  
 b) What are the safety precautions while anchoring. (5)  
 7. a) Sketch and explain the bitter end securing arrangements of anchor cable. (5)  
 b) Explain Permit system. (5)  
 8. a) Describe the markings on the anchor cable for each shackle length from Anchor. (5)  
 b) What are the safety precautions while using Bosun's chair? (5)  
 9. Give a brief description of:  
 a) Pre bunkering check list. (5)  
 b) Enclosed space Entry permit (5)

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