

**NAROTTAM MORARJEE INSTITUTE OF SHIPPING, MUMBAI**

**Examination Paper – March 2024 – First Year**

**Subject – Shipping Practice**

**09.03.2024**

**Total 80 Marks**

**Time: 3 Hours.**

**NOTE : PART - A - Answer 6 Questions out of 8 (10 Marks each)**

**PART - B - All Questions are compulsory (2 Marks each)**

1. Explain what a FLAG STATE of a vessel and list THREE objectives of FLAGSTATE INSPECTIONS.
2. List FIVE major elements which influence the fixing of freight rates and EXPLAIN in brief those FIVE major elements.
3. Explain VTMS and List down FIVE major features of VTMS.
4. Explain in brief the following charter parties.  
a. VOYAGE CHARTER PARTY      b. TIME CHARTER PARTY
5. List the following in a Letter of Credit.  
a. FIVE Documents the seller may provide to the bank.  
b. FIVE Advantages of a Letter of Credit to an EXPORTER
6. Explain TEN responsibilities of a LINER AGENT.
7. Explain ANCHORAGE, List THREE types of anchorage and list down FIVE reasons of a ship going to an ANCHORAGE.
8. List down FIVE responsibilities of an owner of a cargo gear.

**PART B – Compulsory (2 Marks Each)**

1. FREEBOARD is the distance from the waterline to the upper deck level. (TRUE/FALSE)
2. BALLAST TANKS are spaces in the ship which are used to guard them from Ballistic missile. (TRUE/FALSE)
3. PROFORMA INVOICE is a preliminary bill of sale sent to buyers in advance of a shipment. (TRUE/FALSE)
4. TRAMP SHIPPING operates on Fixed Schedule & scheduled ports of calls. (TRUE/FALSE)
5. PACKING LIST becomes a document that will be used to support an insurance claim. (TRUE/FALSE)
6. QUASI NEGOTIABLE term for a Bill of Lading means it is partially negotiable. (TRUE/FALSE)
7. SHIPPING BILL is prepared by the Shipping line for the freight charged to the shipper. (TRUE/FALSE)
8. HYDROMETER is an instrument used for measuring the Hydrogen content in ballast tank. (TRUE/FALSE)
9. ON TANKERS the Temp & density of cargo is of importance to calculate the cargo loaded. (TRUE/FALSE)
10. CLASS RENEWAL SURVEYS/SPECIAL SURVEYS are carried out at five-year intervals. (TRUE/FALSE)

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Q	1	2	3	4	5	6	7	8	9	10	11	12	Total
M	9	10	9	10	9			10				20	77

WRITE BELOW  
PART-A

Ans 1) The IMO (International Maritime Organisation) mandates through its conventions and UN resolutions for the maritime nations to stipulate policies, rules and regulations for its vessels. Akin to the registration of a vehicle under a RTO of its jurisdiction, all vessels, being PROPERTY in nature and carrying a title are registered with the FLAG STATE. The Flag State registers the ships on its books/registered and the vessel gains the nationality of the Flag State and is entitled to fly its flag. The subjects crew on the vessel, irrespective of being of any nationality, during the period of their contract onboard are governed by the rules and regulations of the Flag State. The Flag State imposes and enforces the conventions on safety, security, manning, construction and build of vessel, hull state, state of machinery, compliance to statutory conventions under SOLAS, ILO, Load Lines, COLREG, MARPOL etc through the Classification Societies.

→ The stipulated guidelines on maritime aspects of the ship/vessel, that is provided by the IMO, are stringently ensured and followed by the Flag state, throughout the lifecycle of the ship.

→ For the purpose of adherence to compliances, Flag State

empowers the classification societies to survey and inspect the vessel as per stipulated schedules and issue compliance certificates on safety related issues throughout the vessel's lifecycle.

→ Once the vessel is registered with a flag state, a Certificate of Registry (COR) is issued to the ship, that ensures its tradeability and obtaining of insurance for its operations.

→ Without the COR, which is a basic document, the vessel cannot accomplish / obtain other statutory documents like the Maritime Safety Certificate, Document of Compliance etc.

→ Flag state may be the nation of the shipowner itself if he wishes to register the vessel in the country of which he is a national. Alternatively, the regulations provide him the liberty to register his vessel with the Flag of Convenience / Open Register of any other nation state.

→ few Nations like Netherlands have a second register too, which provides the facility of the registration alternatively.

→ The ships/vessels are subject to stringent checks / inspections by Port State Control that are registered under Flag of Convenience, Nations

Three objective of Flag State are as follows :-

(1) Flag State stringently ensure compliance to all conventions of IMO regarding SOLAS, COLREG, MARPOL etc and ensures that all vessels registered with them are highly seaworthy and in good state of Hull and Machinery to carry out their trade in a safe manner.

(2) The Flag state ensures the certification, training and effectiveness of the crew and officers who man the vessel as per the convention of STCW so that their watchkeeping and training standards comply to the world class standards for safe operations.

(3) The Flag state is entrusted with responsibility of ensuring no marine pollution from the ships due to ballast, sewage, oil and fuel spill etc and ensures high degree of compliance with respect to the environment to ensure clean oceans.

(4) It has the responsibility to survey and inspect and ensure that the vessel registered with them are seaworthy, safe to operate, machinery operating as per standards, good state of hull, crew and manning, soundness of safety equipment, radio equipment, load lines convention etc. The inspection and survey becomes stringent for older ships >15 years. They are responsible to weed out non-compliant vessels and de-register the ships with IMO informed at all times.

Ans 2) ~~The~~ In the maritime industry the freights are governed by Demand and Supply of ships which is dependent upon the commodities demand and supply. Among the two types of shipping, i.e. TRAMP shipping and LINER shipping, the freights show a distinct feature.

→ In the TRAMP shipping, the freight fluctuates as per market conditions of demand & supply and are volatile in nature. It's decided by the Baltic Index in case of Bulk Commodities and Worldclass standard in case of Oil Tankers. At times these freights provide abundant profits to the ship owners/charterers or just coincide with operating cost due to the fluctuation in the market. However, the concept of fixing of freight rates is more associated with TRAMP shipping. Therefore on voyage charter basis

→ In the LINER shipping industry, the cargo routes and schedule of the vessel operating in the sector are generally known and operate on TIMECHARTER basis which is essentially a fixed hire charges provided to the shipowner/charterer. Freight rates generally do not fluctuate here and are stable as the vessel operates on hire basis :-

The fixing of freight rates are dependant upon the following factors :-

① Age and type of ship :-

The newer ships are more reliable, more economical to operate and the lessees insurance costs associated with them. Therefore, the age of the ships directly governs the freight

rates. The older ships are generally not very fuel efficient and need higher coverage of insurance. Therefore, the freight rate is higher in this case. The type of ship, bulk carrier, container, tanker etc also govern the freight cost. The bulk carriers that undertake voyage with slower speeds and homogeneous cargo, and do not undertake survey or fumigation and pesticide due to their sizes, generally have lower freight costs when compared to vessels of other type.

② Types of cargo and its Nature :- The type and nature of cargo impinges upon the freight cost. The dangerous cargo, electronics, reefer containers are costlier to sea transport than the ores and food grains. The cost of unloading and other handling costs associated with nature of cargo directly increase/decrease the freight.

③ Routing for sea Passage longer and circuitous sea routes would cost higher in terms of freight. This may be due to avoidance of bad weather in an area of High Risk Area (Cherry) etc. Shorter trade routes where the shipowner/charterer would be able to easily grab/harness quick business with guaranteed return cargo would cause lower freight for these routes.

④ Demand and Supply in Shipping The freight and its fixing is directly dependent/corresponds to the demand and supply equation. If the demand of ships is high and supply is less, then the freight would obviously be higher and vice versa.

### ⑤ Urgency of shipping on part of shipper

If the consignee or shipper needs to ship his cargo on priority or urgent basis, then the freight applied by the charterer/owners are higher being an opportune moment to make profits. The shipowner/charterer may have to alter his prior schedule/plans to cater for the shipment and hence higher freight is applied.

### ⑥ Previous dealings/Business relations with the shipper

In case of a fixed and regular shipper associated with a shipping carrier, the freight levels are adjusted to lower level to maintain long term business relationship with the shipper.

### ⑦ Other Voyage Costs

The variability of bunker, seasonal fluctuation of bunker cost along a route, cost of handling cargo, stowage, conserved dues, though generally do not affect freight, but a charterer/owner tends to adjust any expenses by adjusting these costs in freight, if need arises.

⑩

## Ans 3) VTMS (Vessel Traffic Management System)

VTMS is a tool for management of marine traffic in congested ports. It helps to enhance the Maritime Domain Awareness of the Port Authorities and the traffic in general. Akin to the ATC or ATIS traffic control for aircrafts at airports, VTMC controls the flow of marine traffic in congested ports in a safe manner. It is usually colocated with the Port Control Office.

VTMS gets its feed through a network of sensors, microwave finding devices, Radars, AIS (Automatic Identification System), Radio finding devices, VHF, DGPS control and monitoring stations, Arrival/Departure schedule of ships. The system generates the picture of traffic operating in the port limits and even beyond ranges on array of screens and computer to provide a wholesome and complete picture of the maritime traffic environment.

The following agencies are the users agencies of VTMS system:

- ① Merchant marine vessels
- ② Coast Guard
- ③ Indian Navy
- ④ Ships at Inland/Outer Anchorage
- ⑤ Port vessels/Tugs
- ⑥ Hydrographic Survey vessels
- ⑦ Offshore Supply Vessels (OSVs)
- ⑧ Auxiliary Port vessels



The major features of the VIMS are as under :-

→ VIMS aids to avoid any close quarters situations or collision in ports harbours which could cause disastrous consequences due to environmental damage and economical loss experienced in nature.

→ The Port Control Authorities constantly monitor the inward/outward movement of the vessels from the harbours and the in-harbours traffic as well.

→ The VIMS advises the ~~safe~~ inter ship safe distances and navigation track maintenance in the harbours approach and passage in harbours.

→ It warns the fast moving vessels in harbours that could come hazardous to smaller boats and yachts.

→ The movement control of ships proceeding in/out of anchorages are controlled and monitored by the VIMS.

→ The conduct of hydrographic surveys and safe dredging operations within the harbours are monitored by the VIMS.

→ VIMS exchanges the information of ships arrival/Departure with other nearby ports to enhance the maritime domain and better management of the maritime traffic.

WRITE BELOW

→ The VIMS is equipped with world class communication equipment (SATCOM & VHF) to instantly communicate with the vessels under its jurisdiction.

→ The berthing operation of the ships and inter terminal movement is efficiently managed and executed through VIMS.

→ VIMS plays a very major role in providing early warning to ships in collision avoidance and navigational situations.

→ The data of the ship IMO no, speed, Gyro feed, LFC, NPC etc provides easy identification and control of vessels in harbor.

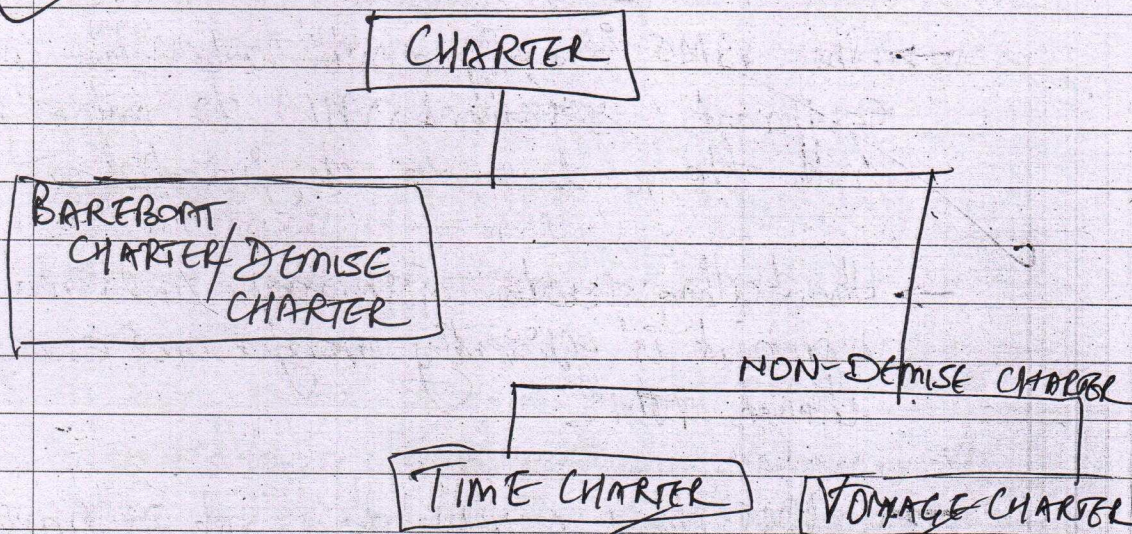
→ For Mumbai Harbour the VIMS is located in the Port Control Building and operates 24/7, Mumbai being an all weather harbour.

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→ VIMS facilitates marine traffic awareness, not only for Port Control authorities but also all the vessels operating in Mumbai Harbour.

→ VIMS can keep track of all scheduled arrivals/ departures beyond the visual range.

Ans 4) The shipping Industry operates through various styles and chartering mechanism. The ships are chartered as following :-



The following are the two types of Non-Demise Charter :-

### (a) VOYAGE CHARTER PARTY

→ A Voyage charter party is the form of shipping where there is no fixed schedule of the ship and no fixed routing.

→ Voyage charter is usually associated with TRAMP shipping where the ship is obtained through payment of "freight".

→ The freight in case of the Voyage charter is not fixed as it is volatile and fluctuates with the demand and supply in market.

→ The shipping Agents and Brokers prepares Voyage Charter

shipping as it provides them the opportunity to make huge profits for every voyage undertaken irrespective it is a consecutive voyage or not.

→ It provides the flexibility to the charterer not to engage the vessel for long durations of time and operate with smaller time frames.

→ In the Voyage Charter, the Capital Costs, insurance, manning, ~~blanking~~, insurance, maintenance etc is catered by the shipowner and accordingly accounted for. The shipowner/Charterer earns his freight.

→ In the Voyage Charter, the operating cost viz. Canal dues, bunkering (if as per contract), port dues, pilotage, berthing etc is catered by the charterer and he earns his commission/share.

→ In the Voyage Charter, the shipowner earns the "freight". In case the vessel reaches and discharges cargo before time, then the ~~charterer~~<sup>shipowner</sup> compensates the ~~charterer~~<sup>shipowner</sup> with "DESPATCH". In case, the vessel is delayed due to congestion or other factors, the ~~charterer~~<sup>shipowner</sup> "DEMURRAGE" is paid to the shipowner.

→ In an event of the breakdown of the machinery or any other reason for non-performance of the voyage, the shipowner compensates the charterer for the losses incurred and undertakes immediate repairs.

## (B) TIME CHARTER PARTY

→ A Time Charter Party is a form of shipping where there is a mechanism where the charterer obtains the vessel from the shipowner for a fixed duration of time and operates it to any region / parts as agreed to in the contract.

→ Time Charter is usually associated with LINT shipping where the ship is obtained through payment of "Hire" charges.

→ The hire charges for a particular duration in the contract between the shipowner and charterer is fixed and agreed to and is paid every 15 days / 1 month as per agreement.

→ Time charter shipping is not preferred by the brokers as the opportunity to earn profit margin are reduced.

→ This provides the opportunity to the charterer and enjoy the flexibility of operating the vessel to any part of the world to transport any cargo authorized to carry to schedule the ships per requirement of the charterer. There is almost nil interference of the shipowner for the duration of hire.

→ In the time charter, the shipowner bears the capital costs depreciation, insurance, maintenance.

→ In time charter, the charterer bears the manning, crewing, cargo insurance, stevedoring operating costs (bunkery, canal dues, port dues, pilotage, light dues etc)

WRITE BELOW

→ As compared to Voyage charter, in the TIME CHARTER, the costs (mostly) are covered and accounted by the charterer.

→ The shipowner covers his "hire charges" at regular intervals as per the contract entered with the charterer.

→ In the event of breakdown of the machinery or the vessel not being available for further voyage, the vessel is "DE-HIRED" and the further payment to the shipowner ceases till the repair is completed and the vessel is ready to undertake the trade.

5+5  
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Ans 5)

(Q) The Letter of Credit is a kind of Guarantee or Assurance of payment provided from the ISSUING BANK (IMPORTER BANK) TO the ADVISING BANK (EXPORTER BANK).

The LC facilitates the payment for the sale of goods, by the Advising Bank to the SELLER, when the goods have been shipped onboard a carrier and the risks and liabilities shift from the SELLER to BUYER. As per the clause of the contract, the payment can be released by the Advising Bank in a PARTIAL form when the cargo onboard the vessel crosses specific geographical location or COMPLETE PAYMENT when it has been verified by the Agent on the Importer's side regarding arrival of the goods.

The SELLER has to provide the following documents to the bank:-

(i) Bill of Lading :- Copy of Bill of Lading signed by the master of the vessel is the document that also acts as evidence of contract and receipt of the cargo by the carrier in good transportable condition. Generation and Issue of B/L is an indication that the risk and ownership of the goods have been passed to the BUYER.

(ii) Proforma Invoice :- Proforma Invoice is the invoice of the goods that have been shipped to the buyer. It mentions the

low. listed and the total cost of the goods/ value of goods shipped to the IMPORTER.

(ii) Insurance of Cargo Document :- The Cargo Insured Document that indicates that the entire cargo has been adequately insured against loss/ damage makes necessary input to the bank regarding safety of the goods.

(iii) Copy of Contract :- The Sale of Goods contract between the SELLER and the BUYER is provided to the bank towards the documentation and necessary verification by the Advising Bank prior to release of funds.

(iv) Port Clearance/Custom clearance :- Necessary clearance by the Port authorities to carry out the export of the Goods to the BUYER is indicated through the documents.

(v) Packing List :- The documents indicating Packaging of the Goods into the packages/units for the purpose of shipment also needs to be attached. The bill indicate the quantity of various subunits of the Goods consignment.



## (b) Advantages of Letter of Credit to an EXPORTER

The business transaction between the importer and the exporter is exposed to risks for the given reasons. As the maritime trade has expanded and with globalisation and industrialisation, the consumption pattern of the developed and developing economies have changes. Higher standards living and other essentials have led to the requirement of export/import of goods from far flung geographical regions beyond a nation / continent boundaries. Therefore, maritime trade is a necessity, however, the following risks exist due to the given reasons :-

- 1) Both the exporters / importers are located in different regions
- 2) Both have different belief systems
- 3) Both have varying standards of commitment
- 4) Both speak different languages
- 5) Both the locations are exposed to different political situations.

Therefore, to overcome these issues and mitigate any risk in the export/import trade, the LC provide the following advantages to the exporter :-

- The political risks and new situations developing post despatch of goods is mitigate.
- Financing for the EXPORTER is facilitated
- Need for any credit checks is ruled out
- Guaranteed and timely payment of goods is assured.
- Risk of credit from bank is ruled out.
- The entire transaction is transparent, clear and legally covered through the banking system

→ The bank stands as intermediary to absorb the risk

→ Necessary scrutiny of the financials of the IMPORTER is avoided as the verification process has already been stringently executed by the bankers.

→ The banking system being more global in nature, would provide adequate risk mitigation to the EXPORTER against any defaults by Importer.

(9)

### Ans 8) Responsibilities of the Owners of Cargo Gear

The Cargo that is required to be loaded/unloaded on the vessel toward its shipments cannot be undertaken manually and therefore the need for specialist equipment and cargo gear arises. The right kind of cargo gear for any loading/unloading operation/handling of cargo is an inescapable requirement in the shipping industry.

The cargo gear provided for their operation are through the cargo agents who engage the cargo gear owners to undertake these operations.

Therefore, considering the essentiality and criticality of cargo handling equipment like slings, cranes, fork lifts, SWR slings, pallets, grabs, cargo nets, ropes etc, it is paramount that the cargo gear crews comply to the following responsibilities :-

→ The cargo gear are in good condition of operation and maintenance and sourced from reputed manufacturers.

→ Necessary routine maintenance on the cargo gear as per OEM instructions have been carried out and record of the same is maintained in the equipment records.

→ The cargo gear is inspected and surveyed by the respective auditing authorities and certifications of safety obtained.

→ It should be ensured the cargo gear is used only for its authorized use as per instructions and is not used to transport/transfer any human without the permission of master or port authority.

→ All crew members/cargo handlers are fully trained and aware of the operation of the cargo equipment.

→ The cargo gear handlers must be fully conversant with the safety related aspects during use of the cargo gear onboard.

→ The cargo gear handlers must operate the equipment under proper supervision of supervisor and experts.

→ Record of any breakdown/maintenance carried out should be

recorded in the books.

→ Only authorised stores must be used to carry out repair maintenance of cargo gear.

→ The cargo handling equipments and gear must be stowed in proper area after used and must not lead to any clutter.

→ Necessary Personal Protective Equipment (PPE) kits must be provided to the cargo handlers for their safety. These PPE gear include hand helmets, harness, steel toe boots, fluorescent jacket and black proof clear goggles.

→ Regular training of the cargo handlers must be carried out by the company and records maintained.

→ Medical check up and snap checks of cargo gear handler must be undertaken at regular intervals.

→ Visual inspection of the cargo gear must be carried out as a daily routine.

→ Necessary load test of wire and equipment should be carried out as per schedule and records of certification maintained.

→ The cargo gear / cranes should not be used to lift weights more than their stipulated SWL. In case of doubt of any cargo / pallet, weighing must be carried out prior handling of the cargo.

→ Greasing & lubrication of the cargo gear components to be carried out, wherever required.

→ Cargo gear should be operated only by authorized personnel

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## PART-B

① TRUE ✓

② FALSE ✓

③ TRUE ✓

④ FALSE ✓

⑤ TRUE ✓

⑥ TRUE ✓

⑦ FALSE ✓

⑧ FALSE ✓

⑨ TRUE ✓

⑩ TRUE ✓

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