

**NAROTTAM MORARJEE INSTITUTE OF SHIPPING
MUMBAI**

Examination Paper – March 2024 – First Year

DIPLOMA IN SHIPPING MANAGEMENT & LOGISTICS – FIRST YEAR

Subject – Shipping Economics

11.03.2023

Total 60 Marks

Time: 3 Hours.

Answer any 6 questions from the first 08 question, of which question 08 is compulsory

Each question carries 9 marks (i.e. for 5 questions), while question 08 carries 15 marks (total = 45+15)

- Q1) Draw a typical shipping cycle, explain its various sections? Draw the Break even point and explain?
- Q2) What kind of fuel is used on ships? Explain different aspects of Fuel Management viz. technical aspects, operational aspects, purchasing aspects and chartering aspects?
- Q3) Write a short note on “Disbursements” and briefly explain the term “Proforma Disbursement Accounts”, what all it contains?
- Q4) How to define the term “Balance of Payments”? What are the components of the Balance of Payments? How to differentiate between the terms Balance of Trade and Balance of Payments?
- Q5) What causes fluctuation in Shipping freight market? What factors affect demand in shipping?
- Q6) Explain the organizational structure of ports and briefly explain their duties?
- Q7) Briefly describe the process for purchase of a second hand ship.
- Q8) Calculation problem as per Annex One.

ANNEX ONE

Orinoco Shipping Company Limited required a ship for \$ 10,000,000/- and spent \$ 2,000,000/- towards capital expenditure to put ship into use. The balance life of the ship is 10 years.

The company got her insured at 10% of her Capital value. The freight was also insured at 5%, the amount of policy being \$3,000,000/-.

During the six months from 1st Jan 2023 to 30 Jun 2023, the ship made three round trips to Antwerp and was half through the fourth trip (one way completed).

It carried the following cargo.

To Antwerp 25,000 Tonnes @ \$. 72/- per Tonne

From Antwerp 19,000 Tonnes @ \$75. /-per Tonne

To Antwerp 24,000 Tonnes @ \$ 71/- per Tonne

From Antwerp 20,000 Tonnes @ \$ 78/-per Tonne

To Antwerp 24,000 Tonnes @ \$71/- per Tonne

From Antwerp 19,000 Tonnes @ \$ 72/-per Tonne

To Antwerp 22,000 Tonnes @ \$ 76/- per Tonne

Address commission was 5%.

The expenses incurred were:

Port Dues \$ 320,000/-

Wages & Salaries \$ 420,000/-

Fuel \$ 3,235,000/-

Stevedoring \$ 120,000/-

Stores \$ 50,000/-

The ship is to be depreciated fully during the balance life of the vessel with NIL residual value.

Prepare VOYAGE ACCOUNT to ascertain profit or loss for the period 1st Jan 2023 to 30th Jun 2023

Subject: Shipping Finance

Total Marks: 20

Answer **any 4** questions, each carry equal marks

Q1) What are the special features of the International Markets?

Q2) Write a short note on Foreign Exchange Management Act, 1999?

Q3) Explain Investment appraisal in shipping?

Q4) Explain ADR & GDR and why is it raised by companies?

Q5) In forex market, explain the role of RBI and Restricted Money Changers?

Q6) Explain PESTEL factors?

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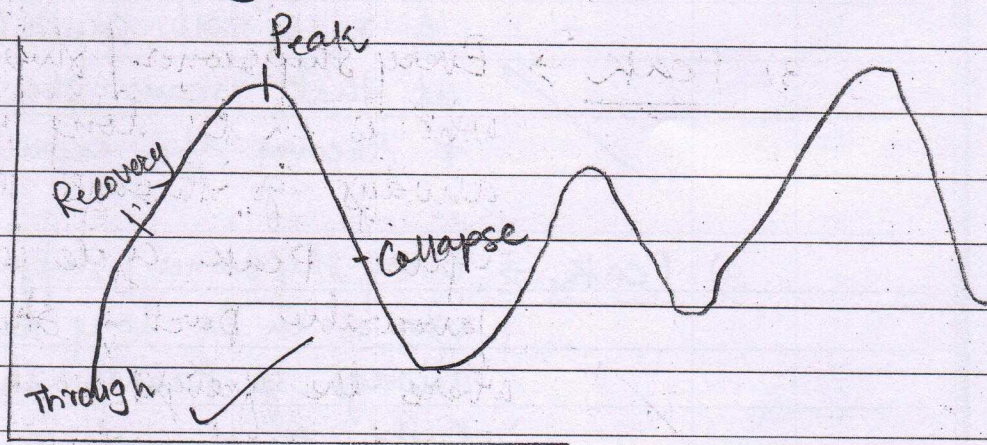
TOTAL MARKS

Subject SHIPPING ECONOMICS AND FINANCE

Q	1	2	3	4	5	6	7	8	9	10	11	12	Total
M	8+4	9+2	7+2	7+3				15					65

WRITE BELOW

Q.1. Life cycle of Shipping



Shipping life cycle basically go through four different stages as follows.

- 1) Through
- 2) Recovery
- 3) Peak
- 4) Collapse.

1) Through → In this stage shipowner/shipping company indulge into business and however manage the daily routine of the ship and try to maintain into the business to go through the stage in view of some sort of improvement in the market.

2) Recovery → In this second stage of shipping cycle owner of shipping companies just try to recover their indulged expenses. Ship started earning in such a way that she able to manage their own expenses as well contribute to repay the capital invested into it that means she has started to recover the expenditures, in:

3) Peak → Every shipowner / shipping company who is in to long run of business always go through this phase of cycle. Peak cycle is the most favourable part of shipping cycle where the freight charges go to such a high some times double, triple any up to any extend. In this stage shipping companies / ship owners earn good money and clear all debt on company. Since the demand in shipping is derived demand it again goes to next stage.

4) Collapse :- After being on peak stage of cycle the supply increases in the market and ultimately it collapse and shipping market come down to collapse stage. It's a bottom stage of the cycle again market is ready to

boost and same cyclic stage is being goes on and on.
 This ~~to~~ All this happened because demand in
 Shipping is always derived demand and it is not
 fixed so each and every shipowner and Company
 has to go through all these four shipping cycles.

Q.2

Ans. Following fuels being used on ships.

- 1) HFO - Heavy fuel oil.
- 2) IFO - CST-180 - CST-380.
- 3) MGO - Marine Gas oil
- 4) Diesel - Diesel.

Big ships main engines are running on heavy fuel oils. like HFO, IFO, CST180, CST380. These fuel prices are less comparatively MGO and Diesel. These fuel contains high sulphur contents. As per IMO 2020 regulations fuel of 0.5% sulphur contents is permission to use in ships also it is not allowed to use fuel of 0.5% sulphur not allowed in Europe waters. It has been restricted to 0.1% sulphur contents max. So viewing these facts and considering technical aspects, operational aspects purchasing aspects and chartering aspect fuel management plays vital role in shipping. The largest expenditure in operation of ship is fuel. So every ship owner and charter to know about fuel consumption of ship and accordingly ship get charter.

4
Q 2. Contd. ---

1) Technical Aspect — Technical

Technically fuel should be able to cop up with the rules and regulations of environment and it should follow international guide lines issued by different authorities different region. As mentioned above fuel should not be more than 0.5% Sulphur Content as per the new guide lines issued by IMO. 2020. Earlier it was 3%. So such development being taken place which companies should be aware and follow technical @ parameters of the bunkers otherwise it would violate environment rules and regulations and would cost to heavy penalties on company and ultimately it would increase companies expenses and ultimately increase in the expenditure. Also

2) Operational Aspect →

In Operational aspect Superintendent of ship to see that machinery life should not be affected due to bad bunker. The NOx and SOx

(Nitrogen oxide) and (sulphur oxide) these two tests engine should be within the parameters

for long life of machineries fuel should be of good quality & so maintenance on machinery reduces, ship gets good steaming speed and operation wise ship performs good.

Good ships also be in the demand and gets good charters. So operation aspect ship's staff is also happy with good machineries. Ultimately operational aspect fuel management is as above.

Q 2.3 Purchasing Aspect → The prices p.

The fuel price play important role in shipping. The large expenses out of operating the ship in Voyage Charter and bareboat or in time charter is fuel / Bunker. So while purchasing bunker the purchasing team always pay search which port they will get good quality of bunker and price aspect. Whatever they can save on bunker is ultimately profit to Company.

Bazair, Singapore, Rotterdam, these are some of the famous bunkering ports in the world and ships could save some money to plan to get bunker loaded in these ports, as it depends upon on which route ship is steaming.

4. Chartering Aspect -

Charterers are very keen while choosing ship for charter. They first ask how much is fuel consumption of ships. Accordingly they negotiate with the ship owner. Because the large / intensive expenses in ship running is of bunker. All the further equation of ships chartering varies with fuel consumption of ship. Charter always gives preference to the those ships where fuel consumption is less.

(9)

Q 3.

→ Short Note on Disbursements -

→ Disbursement means the expenses done by the agent person to perform a ~~part~~ particular task anywhere. In shipping the term disbursement means the expenses done by the port agent who act as principles agent in the port. known as Disbursements.

When ship comes to any port, since from ETA of ship till departure or sailing whatever expenses agent done for ship on behalf of principle is known as disbursement account.

~~Performs~~ The expenses done towards following

- 1) Pilotage
- 2) Stevedoring / mooring
- 3) Port fees
- 4) Cash to master for shipping expenses.
- 5) Stationery to ship.
- 6) Light house payment
- 7) Agency fees.
- 8) Sundry expenses.
- 9) Berth charges.

All Above expenses in shipping is considered in disbursement, expenses.

Q.3 Proforma Disbursement Account -

This account is that the Agent gives a estimated cost for looking after the vessels. in and out activities without delay. This account agent submits in advance prior vessel to comes inside the port. As mentioned above all the expenses which need to carry out inside the port are addressed in the proforma disbursement Account.

The expenses like - A Pilotage

In this account agent add all the expected expenses while ship enters and departs or sailing. According this account owner (charterer of ship) make payment to Agent and agent do all the relevant expenses out of these money and keep record of expenses by attaching vouchers duly signed by Master and other port officers or concern person and same shall be sent to the owner after departure of ship along with final disbursement of Account.

Proforma Disbursement Account-

SR. NO	Description of Account	Amount
1)	Pilotage	5000
2)	Agency fees	10000
3)	Stevedoring	10000
4)	Port Charges.	2000
5)	Light house dues as per CRT	eg. 5000
6)	Sundry expenses.	10000
	Total (PDA)	1,32,000/-

DDP - Delivery duty Paid
DDU - ~~in~~ unpaid

DAP - Delivery at place

DAT - Delivery at Terminal

EXW - Ex workshop -

FOB - Freight onboard

CIF -

EXW - Carver freight alongside

TRPC - Thorough, Recovery, Peak, Collapse

Commodity - specialized goods to generate & not
specialized in

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WRITE BELOW

Q.4

→ Balance of Payment

The Payment export and Payment import is known as balance of payment: Balan

The Balance of Payment shows the worthiness of any country. The Balance of Payment depends upon the total export of merchandise or any other services and total import of Services and payment made towards those ~~fast~~ things are known as Balance of ~~Trade~~ Payment.

Following factors influence balance of payment-

- 1) Exporting of goods will be the ~~ex~~ income to the country and ~~importing~~ of goods is expenses to the country.
- 2) Exporting of tourism, expenses in foreign country these are exports but it is minus in balance of payment and is treat as expenses in balance of trade and ~~vice versa~~
 Foreigner came to our country and spends here, are come under import but its income in balance of trade.
- 3) Our ~~emp~~ are citizens working in foreign and they send money is also income of foreign currency.

to our country.

c) The investments done by NRI is also income in balance of payment.

Q There are following accounts in Balance of Payment

1. Current Account \pm Plus minus
2. Capital Account \pm Plus minus
3. Official account \pm Plus minus.
4. Balance \pm

~~The~~ Current Account -

1. The export done by ~~the~~ balance of trade and import done by balance of trade both considered in it. That means direct expenses and income is being taken in consideration.

2. Capital Account -

Indirect expenses like the trade import done income like foreign tourist arrives in country they give income to economy, vice versa.

3. Official account -

Foreign investments done by NRI and foreign investments done by foreigner. Here investments done by NRI is treated as income to Country, and investments done by foreigner treats as expenses. Also the amount getting by fluctuating of currency is income and expenses in both of Balance of Payment.

Balance of Payments Account

Cap Current Account.

Plus Balance of trade exports

minus Balance of trade imports.

Plus Income through foreign tourist

minus ~~Income~~ ^{Expense} through our tourist

Current
A/c.

Capital
Account

Official
account

Plus investments done by NRI

minus investments done by foreigners

Balance.

Difference between Balance of trade and Balance of Payment
Balance of trade -

The total export done by Company and total import done by Company, the difference between their volume is known as Balance of trade.

Those economies whose export is more than their import is known as ~~Balance~~ Positive growth Companies and those Companies ~~are~~ economy is treated as booming economy and vice versa.

The Balance of Payment -

The total amount of export and total amount of import done during fiscal year is known as balance of payment. As mentioned above, all type of different incomes, ~~are~~ and expenses are there as mentioned above.

Chairman of port

Admin
- Finance
- Operations
- Commercial

Conservator

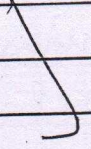
Deputy Conservator

+ Port Activities

Port health officer

Harbour master

Port staff



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WRITE BELOW

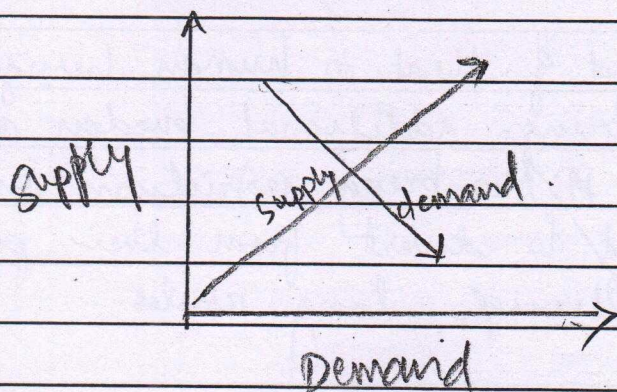
Q.
Q.05

1. The supply and demand causes fluctuation in shipping market. The demand is always derived demand.

Following Point causes fluctuation in shipping freight.

1. Supply and demand ratio -

Whenever the availability of ships increased or supply increased the demand decreased and it ultimately affects on the freight market. The freight decreased because the charterers have options to bargain / negotiate with more ship owners and shipping operating expenses are more so no shipowner want to keep their ship idle. So these factors fluctuate the freight and vice versa. If demand availability of ship is less then freight price goes up because no ships available to negotiate and urgency of cargo movement.



2. Govt Policies →

Govt policies plays vital role. Govt brings some rules which directly cause the stoppage of vessels. e.g. older ships not to allowed. Older ships ~~emits~~ emits more Carbon di oxide (CO₂) and sulphur di. oxide in the environment. So ultimately the supply chain impacts and it affects on the freight.

3. Environmental care →

Viewing towards environment in Europe has come up with O.I.F. Sulphur fuel only be used and so it affected the freight. More the cost of fuel more the expenses and ultimately on freight price.

4. Trading Area →



The ships plying through which area also cause the freight. e.g. ships going through 'Canals' their freights are always on higher side.

5. Piracy →

Piracy is a kind of threat to human beings and assets. Piracy brings additional burden on the ship expenses. Also bring restrictions on traders, some lines need to divert from their path and need to go through long routes.

6. International instability -

Sanctions and embargo's on countries affects on supply and demand ratio.

Following factors affects demand

1. Political disturbance -
2. Sanctions / Embargo.
3. Scraping of old ships
4. New ship building
5. Govt Policies.
6. Pandemics.
- 7.

Q.8

1. Freight Earning -

+ Primage

Gross freight earned

less Address Commission 5%

Port dues

Fuel

Stewardsing

Stores

USD.

USD.

11233000

Nil

11233000

561650

320000

3235000

120000

50000

Depreciation

10000000

2000

$1200000 \text{ per year. } / 2 = 6,00,000/-$

$10\% \cdot 1,20,00,000 \cdot 10\% = 1200000 / 2 = 6,00,000/-$

$1,50,000 / 2 = 75000/-$

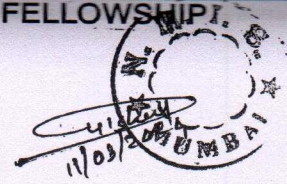
Q.8

A	Gross freight earned		1,12,33,000/-
	+ Primage	Nil	
B	Gross freight earned		1,12,33,000/-
	Less Address Commission 5%	561650	
C	Net freight earned		10671350
	Less (Direct operating expenses)		
	1. Port Dues	3,20,000	
	2. Fuel	32,35,000	
	3. Stevedoring	120000	
	4. Stores	50000	
D	- DOP	3725000	
E	(Gop) Gross operating profit (C-D)		6946350
	Fixed expenses.		
	1. Wages & salaries.	420000	
	2. Depreciation	600000	
	3. Insurance of Ship	600000	
	4. Insurance on freight	75000	
F	Fixed expenses.	1695000	
	(E-F) - Net operating profit		<u>5251350</u>

The Gop is 6946350

The NOP is 5251350. ✓

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WRITE BELOW

SHIPPING FINANCE

Q.1 Special features of International markets -

→ International market is the way to keep the trade uniform and the supply and demand ratio less volatile.

2. Due to the international market trade overseas is possible. and

3. Due to Geological & Geographical Condition the equilibrium can be maintained.

4. Whatever production here in India due to tropical region is more and what is less that can be export and import as per requirement.

5. International market make available fundings and investors which brings empowerment and growth of the company.

6. International market provides funding / finance with low rate of interest. Countries like Japan, Germany Canada.

7. Private equity concepts came from this market.

8. International market is window towards bring funds, finance & technology and can boost economy of company.

9. International market in shipping provides more opportunities to ship owner by providing less fuel on competitive price, ship on low rates.

10. International market keeps stability on overall trade

Q2 Foreign Exchange Act (FEMA) 1999 ?

→ FEMA brought regulations on overseas trades. It has made rules more strict on the money sent out of country, but not on money

FEMA is regulatory body of govt who deals in monitoring the funds movement and it restrict those funds which can harm to country. Money laundering is especially targetted by FEMA.

④ FEMA is specially target the terrorist actions which caused instability in the country.

Q3 Investment Appraisal in Shipping ?

→ Shipping is one of the booming segment of economy. It is cash intensive investments in shipping.

Shipping business is one of the high profile business based on derived supply and demand theory.

In common days shipping will be more fast.

④ 70% of land on earth is occupied by water so that much area is free for trade.

90% of world trade happened through shipping. So in coming days max investments will be in shipping.

The ROI of this business is good.

Shipping attracts investors. Govt also provides to subsidy to enhance / to boost the business. About 30% subsidy is given for new shipbuilding

Q 3 Forex market -

It is foreign exchange market which operates on fluctuated rates of currency.

Role of RBI.

RBI is govt body working for Govt of India. It fix the policies for bank and oversea transactions. All the foreign transactions of money, import and export all are Regulated by RBI.

RBI keeps watch on the all transactions and see that wrong transactions should not take place.

RBI provides guidelines, training to educate overseas transactions.

RBI plays vital Role in controlling the oversea transactions.

Q 4

Restricted money Changers -

These bodies are registered with RBI and they work as per RBI rules and regulations.

They provide platform of easy access to common man. But they have limitations of working. Within the Country they work as money exchangers. In India they can access money from abroad or foreign but do not allowed to send money out of India.