

Narottam Morarjee Institute of Shipping
Mumbai

Examination Paper - March 2019

Fellowship/Post Graduate Diploma in Shipping Management - Final Year

Liner Trade & Multimodal Transport

09.03.2019	Total 100 Marks	Time: 3 Hours
NOTE: Answer any FIVE Questions. All questions carry equal marks		
Q.1 Explain in brief the following: a) Terminal Handling Charges (THC) b) Low Sulphur Fuel Surcharge (LSS) c) Port Congestion Surcharge (PCS) d) Bunker Adjustment factor (BAF)		-5 -5 5 -5
Q.2 Explain the term FREIGHT FORWARDER List the Typical work activities of a FREIGHT FORWARDER		-5 -15
Q.3 Explain IMDG CODE in detail List down the various classes of Hazardous cargo under the IMDG code		-10 -10
Q.4 Write short notes on any TWO a) Import cycle of a container b) Export cycle of a container c) Difference between Feeder Ship & Mother Ship d) Fixed Berthing Windows		-10 -10 -10 -10
Q.5 What are the REASONS & List the benefits to have an ALLIANCE or VSA. Give an Example of a current ALLIANCE or VSA with its Partners		-15 -5
Q.6 Explain in detail the principle of HUB & SPOKE arrangement in LINER TRADE. Give an example of a Regional HUB with its spoke with a Diagram		-15 -5
Q.7 Explain with a DIAGRAM the Container Terminal & the movement of cargo at a container terminal. List the Various Equipments used in a Container terminal with brief description		-10 -10
Q.8 Explain the centres of activity around which operations of ICD/CFS takes place. List down the benefits of an ICD/CFS		-10 -10

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SUBJECT : LTMT

Q	1	2	3	4	5	6	7	8	9	10	11	12	Total
M		(14)	(16)	(15)		(16)		(14)					(75)

WRITE BELOW

Q
3

IMDG Code

International maritime dangerous Cargo Code

In Maritime transportation of Cargo there are many type of Cargo transported out of which dangerous Cargo should be handle in proper and expert manner.

On the national and international level various Organisation is derived the method of transporting with risk assessment and handling.

United Nations Federation of Dangerous Cargo Transport ; IATA,
and International Maritime Organisation's
International maritime dangerous Cargo Code
are derived.

On this Code basis Cargo should handle, life, lash, secure and transport.

By this Code the dangerous Cargo is transported in international trade.

Each and every nature of property Classed dangerous Cargo have different hazard in the human environment.

There are 9 classes and
Sub Divisions in the IMDG Code.

IMDG Code Classes

Class 1 :- Explosion

Class 2 :- Flammable gas

Class 3 :- Flammable liquid

Class 4 :- Flammable solid

Class 5 :- Oxidizing Substances

Class 6 :- Toxic Substance

Class 7 :- Radioactive

Class 8 :- Corrosive

Class 9 :- Miscellaneous

Class 1 :- D.G.'s explosion Cargo

while transporting the cargo
may detonate or explode
by heat or friction on
various reasons.

(ex) Ammonium, fire cracker,

There are 6 Sub Divisions

Division 1 :- which can explode main
explosion by sensitive

Division 2 :- It contain sharp hazard
sharp edge can harm.

Division 3 :- Immediate and explosion
in main.

Division 4 :- Open explode main.
explosion by sudden gas

Division 5 :- Harmful to air show

Division 6 :- Substance which
contain main stream
Explosion

Clause 2 :- Flammable Gas

In this hazard normally
600 mpa pressure in the gas cylinder
and +60 to 65°C temperature
contain, when it open to sun
or atmospheric pressure changes of
explode.

Sub Division

Div 1 - Flammable Gas

Div 2 :- Flame non flammable Gas

Div 3 :- Toxic Gas

(ex) Nitrogen, Oxygen Gas, Methane Gas

Clause 3 Flammable Liquid

It is compressed + stored in cylinders at temp $+50^{\circ}\text{C}$ at the cylinder.

When its exposed to sun or heat or friction or open to atmosphere get exploded and human animal harmful

There is no subdivisions

eg LNG, LPG, liquid petroleum

Clause 4 - Flammable Solid

during transportation the friction force, or shaking it may change to liquid

It may harmful to all environment and its used to all mechanical & Automobile components

Div :- 1

Div :- 2

eg Sodium Battery
Sodium peroxide

Clause 5 :- Oxidizing Substance.

This Oxidizing Substance Contact with open air mixing with oxygen and contaminated the material is called Oxidizing Substance.

Iron + Oxygen = Iron peroxide

Zinc + Oxygen = Zinc peroxide

when its oxidizing agent Corrode the material and infect the human tissues.

(ex) Iron, Zinc, Paints thinner

Clause 6 :- Toxic Substance

Toxic Substance Contain Corrosive Gases mixed with the material make material Corrode and Destroy the material these toxic substance and in various material while transport these masses should closed tightly from air.

Div 1 :- Toxic Substance

Div 2 :- Organic Oxidizing

(ex) Nitrogen peroxide, HCl,
NaCl, Acids, Dis

Clause 7 :- Radiative

These material/ substance while transporting they emit rays, viz. Radiations Lasers while it comes by the UV comes and should be transported

There is no sub division
On this Clause

Lasers, UV, Infrared

Clause 8 :- Corrosive

When these substance direct contact with the body or container these impacted / destroy the skin or materials

There is no sub division on
this clause

Ex: HCL - Hydrochloric Acid

Clause 9 :- Miscellaneous

What ever not listed in above will be included in this Clause
There is no sub division in the Clause

Q4 Import cycle of Container:-

On transshipment

When the Container are exported to the another destination the Origin port will send the Cargo manifest which contains the all the details about the Cargo, Invoice, Packing List

These manifest forward to
 7. port and Airline forwarder /
clearing and forwarding agent:-

The C&F agent Recover
 the Documents from the Bank
 and Submitted to the liner
 with Custom duty. Once the
 Custom duty paid the Receipt
 of Customs to with B/L
Collection of D.O.

Once the All the Documents
 are Submitted the Deliver Order
 to be collected from the Carriers
 and Submit to the port

Port activities:- / Carrying actions

Once the vessel is
 reaches the port, the port have
 a manifest of Offloading Container
 which is provide by the Carrier

Container Yard:

After keeping the Containers in the
CY.

Custom Clearance and

physical or health inspection take place
by Custom Official & Health Officer
For port

The process Completed Carrier
Issued DO to Gate out the
Containers.

Consignee approaches and pay
the duty to the clearing and forwarding
agent. all port charges like

- ① Terminal handling charge
- ② Port tax
- ③ Custom Duty.
- ④ Brokerage tax
- ⑤ VAT. and other Taxes
- ⑥ Sales tax.

As per the Custom processes
the this documents Submitted
Deliver Orders to the port

Port is releasing the gatepass
then the Container is released
as per the instruction of port staff

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WRITE BELOW

Transporter :-

The transporter acts main role in import cycle.

After getting Delivered Order the transporter goes to port and respect address of the Container location and gets the Container

These Container and having Container No to gate out

Gate pass.

After port Gate pass this Container is moving out of the Gate and reaches the Consignee warehouse

Consignee

Consignee get the Cargo and un-stuffed the this Empty Containers return to the port for further transportation of Cargo.

94
10

Feeder Ship

Mother Ship

① less than 2500 TEU

More than 2500 TEUs

② Geared vessel to perform the loading and unloading operation where infrastructure yet to develop

Geared less vessel
Since its operating between hub port which have infrastructure

③ Coastal or inter Country Transportation

Deep sea / Blue sea Transportation

④ Short distance Coverage

Long distance Coverage

8

⑤ Schedules are fixed and Schedules

Can be adjustable the schedule

11

⑥ Connect the minor port to hub ports

Connects only hub ports

⑦ Can possible to enter exit in short draft ports

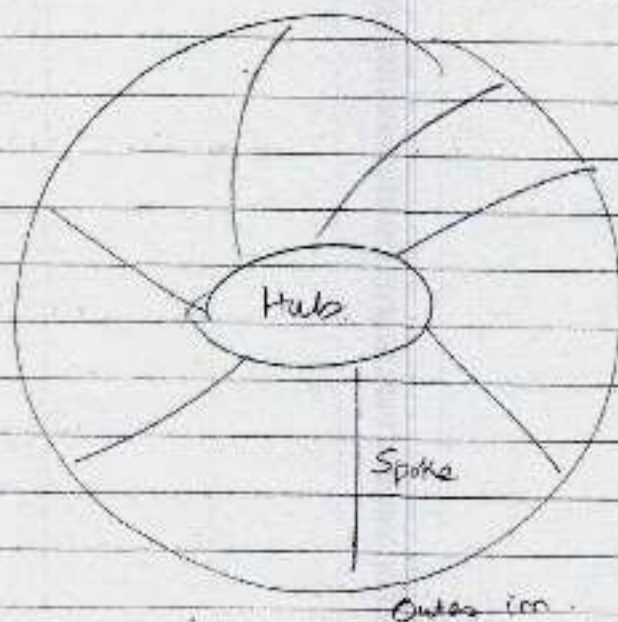
Require more draft so with stand heavy vessels

⑧ Cover main ports during voyage

Cover limited Hub ports

(9) failed in <u>economy of scale</u>	matching <u>economics of scale</u> .
(10) <u>Low mileage ships</u>	<u>Better mileage</u> .
(11) operations and scheduling is a challenge.	It connects hub port so not much challenge.
(12) enough for less draft port to operate	Require 12 + 16+
(13) 6 to 12 m. DWT	m. Draft require
(14) Every day schedules	to berth in these ports. Every week schedule.
(15) Returns the Cargo from mother vessel and Deliver to the <u>Spoke ports</u>	Connects only <u>hub ports</u> .
(16) operated by single vessel owner or shipping company or liner companies	operated by <u>alliance or liner companies</u> .
(17) Connects <u>inland waterway</u>	Only <u>Deep sea</u> .
(18) During winter Can not operate in some <u>Antarctic</u>	(19) All seasons operation

Q6 Principle of Hub & Spoke Arrangements



Cycle Rim

⇒ This linear trade is acting like a hub & spoke of the cycle.

⇒ Hub is connected by the spoke. So these spokes are carrying the torque and force to the outer rim.

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⇒ Likewise, the spoke feeds vessels connects the interiors and get the cargo and deliver to the hub port.

WRITE BELOW

⇒ Daily Schedule for feeder vessels

⇒ Fixed Limited Schedule in
mother vessel on Hub Port

⇒ Connect the Spoke in the
inland waterways and
Coastal waters.

⇒ Hub Connects only alternation
ad Hub ports.

⇒ Feeder vessel and Spoke vessels
are Geared vessel to avoid
loading infrastructure. to provide

⇒ feeder vessels may operate

Pentagon, Butterfly type
Lines.

⇒ Hub Pattern, Ship ~~loss~~ RTW

Round the world operation

⇒ feeder vessels and ports are
less drafted so only less
Tugs can board.

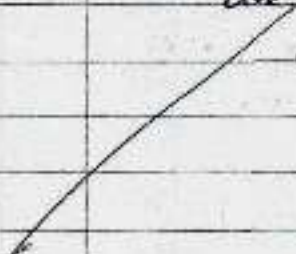
⇒ Has ports and more drafted
so higher draft

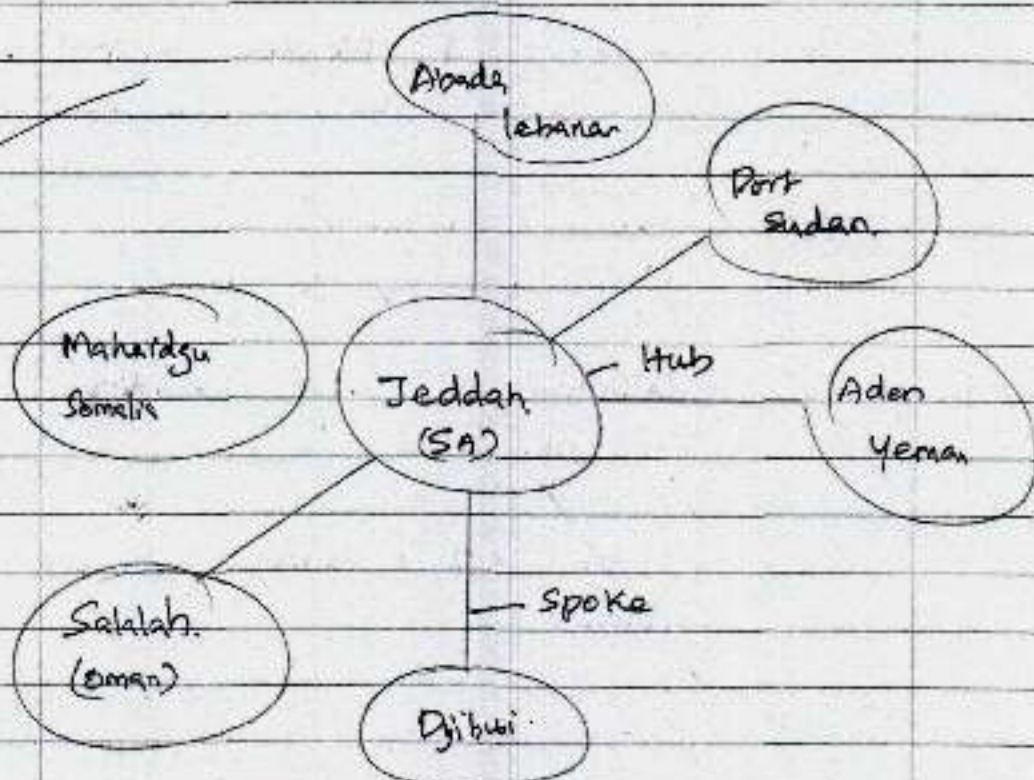
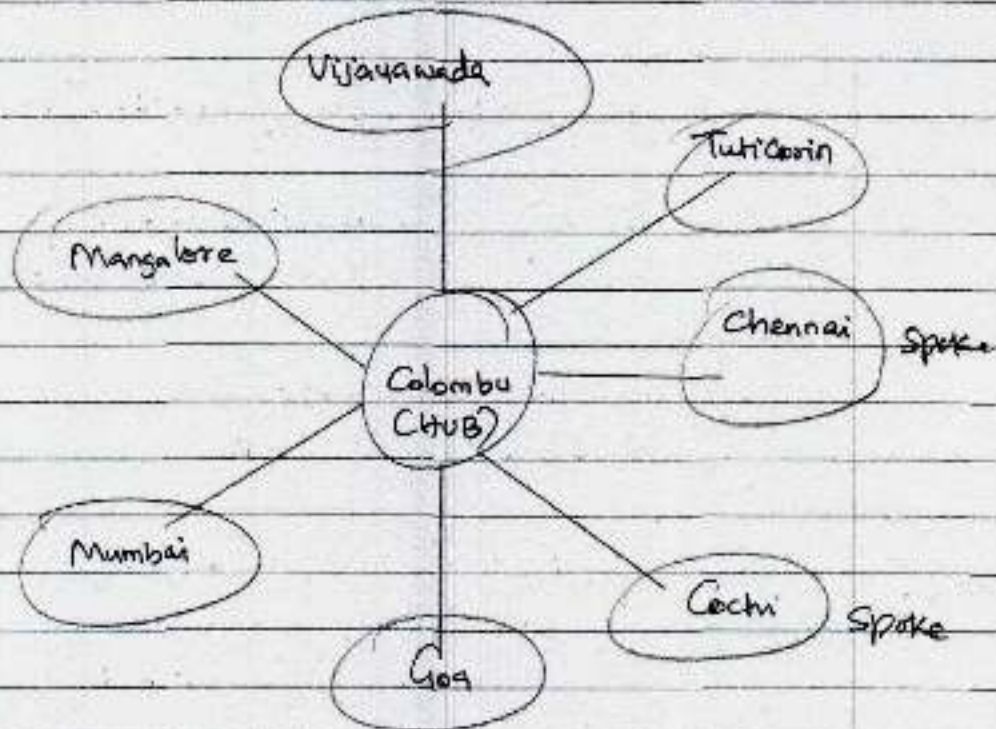
⇒ Spoke and Covering Shortest
distance

⇒ Hub and Covering longer distance

⇒ Hub Cover liner and have
more fleet to cover the
regions

⇒ when as spoke / feeder vessels
are covering coastal areas
or inland waters





Q.8 Operations of ICD / CFSInland Containers depot / Container Freight Station

- ① Customs Clearance activity takes place where Cargo received
- ② Collection of Cargo and providing the receipt
- ③ Segregation of Cargo by Consolidation, Segregation and Separation by harmonized.
- ④ Containerization of Cargo for Consolidated Cargo
- ⑤ Loading and offloading operations are taking place in ICD/CFS.
- ⑥ Customs Inspection, Health inspection of Cargo
- ⑦ Collection of payment, providing receipts.
- ⑧ Drawing Bill of lading by the Liners
- ⑨ Cargo, Lashing, Securing, Segregation, palletization
- ⑩ Delivery to the Consignee

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WRITE BELOW

- ⑪ Container Repair as per the
ISO, Cso standards.
- ⑫ Transportation of Containers from
port to RCD and vice versa.
- ⑬ Health officer to Inspect the
Container having food &
medicines Container.
- ⑭ Collection of Cargo from
various location and finish
the packing, Containerisation
Custom duty, Taxes.
Import / Export process,
Transportation.
- ⑮ Repacking or Consolidate received
Cargo to the delivery to the
Consignee.

Cond...

Q8 Benefits of an ICD / CFS?

- ① Reduces the Cargo dunnages.
- ② Lashing / packing can be done.
- ③ Reaching / Connecting the inland interior place where the port are not available.
- ④ Payments are made in ICD so the Customer need not to go to the port facilities for the import and export formalities.
- ⑤ Consolidation may benefits to the LCL Cargo Customers those who doesn't have Full Container load.
- ⑥ All the Exports in one place so solution can be done in Quick manner.
- ⑦ All the Import & Export process are Streamlined, so Quick and Fast delivery of Cargo.
- ⑧ More than 200 ICD / CFS

⑨ Freight Forward, Broker, Agents are available for your Cargo Solutions.

⑩ Air Cargo Can be received

⑪ Because DCD are in internal land Congestion can be avoid.

⑫ For operating multi modal transport, these facilities are help in massively.

⑬ Container Repair workshop are available to Repair the Quarntined Containers.

Q2 Freight Forwarder.

Freight Forwarder and multi
Specialist in Cargo movements.

They are the one ~~are~~ forwarding
the Cargo against freight.

So they are called
Freight Forwarder

FF are closely working
for the Clients to forward the Cargo
to the respective destinations.

ROLE OF FREIGHT FORWARDER

① Providing Solution to handle the
Cargo

② Any destination around the world
Connects by the Solutions and
Lines

③ Freight forwarder can provide
Solution by rail, road and
Seaborne trade

④ Freight forwarder helps to
pay the freight on behalf
of the Shipper to the
Carrier and called it
from Shippers.

14

WRITE BELOW

- ⑤ Freight forwarder can handle the cargo from DPP to Ekw.
- ⑥ providers of inland transportation by providing technical solutions.
- ⑦ Connect with respective liner and gets the better price to pass on the customer.
- ⑧ Connect with international office and fulfill the destination requirements
- ⑨ make available of Containers to stuff the cargo for the customers.
- ⑩ Door to Door deliver solution
- ⑪ providing Insurance Services to cover the cargo.
- ⑫ provide solution for lashing / Securing the cargo.
- ⑬ providing solution for Hazardous

- (14) providing Solution for Food products and medicines.
- (15) Handling the Reefer, Fender, open top Containers for Customized Solution for the Customer.
- (16) Using Computer, they are tracking Cargo and pass on the Container.
- (17) Providing e-portal access, the freight forwarder are clearing the Cargo by using Custom portal.
- (18) providing Solution Over Size Cargo or Heavy Cargo Solution for Transporting through Land, sea etc.
- (19) Act as a Custom broker, freight forwarder, Consolidator, Agent.
- (20) Attending Lines Conference and get the Good freight rates.