NAROTTAM MORARJEE INSTITUTE OF SHIPPING
MUMBAI

Examination Paper – March 2016
Associateship/Post Graduate Diploma in Shipping Management – First Year

GEOGRAPHY OF SEA TRANSPORT

11.03.2016

Total 100 Marks

Time: 3 Hours.

NOTE: Questions 1 & 2 carry 20 marks each and are **compulsory**. Rest questions carry 15 marks each and answer any FOUR.

1. On the outline map ‘A’ marks & name the following:
   
   (a) Two Permanent 'Tropical Zones' (Load Lines) ..... 2
   (b) Malacca Strait/Java Sea/Yellow Sea/Japan Sea. ..... 4
   (c) Two Tea producing/Export Area with names of Export Port. ..... 4
   (d) VLCC Route from Crude Oil Export region to CHIBA (Japan). ..... 2
   (e) Three bunkering ports. ..... 3
   (f) Local Time in five different countries in reference to 12:00 Hrs. UTC (GMT) ..... 5

2. On the outline map ‘B’, mark & name the following:

   (a) Gulf Stream/ Canaries Current/ Labrador Current/Mozambique current/ East Australian current - All with direction of flow & whether cold or warm. ..... 5
   (b) Three Iron Ore export areas. ..... 3
   (c) Two Bauxite Producing & Export Areas. ..... 2
   (d) Two important shipping canals with names of ports on each end & Name the seas these join. ..... 6
   (e) Capt-size Bulk Carrier route Brazil/S.Korea with names of ports each end. ..... 4

3. Differentiate between:

   (a) Entre port & Bunkering port. ..... 3
   (b) Grounding & Beaching. ..... 3
   (c) TEU & FEU (in reference to container trade) ..... 3
   (d) Free Trade Zone and Free Port. ..... 3
   (e) Ocean Current & Tide. ..... 3

4. Write a brief note on each of following:

   (a) Suez canal has its own problems inspite of benefits. ..... 5
   (b) St. Lawrence Sea-way & its importance to shipping. ..... 5
   (c) Panama Canal has limitations; Why? ..... 5

P.T.O. ..... 2/-
5. What do you understand from:
   (a) Seasonal Tropical Zone. ..... 5
   (b) Timber carrier have additional load lines; Why? ..... 5
   (c) Fresh Water Allowance & Brackish Water. ..... 5

6. (a) What are advantages & disadvantages of Ocean currents towards Shipping & Commerce? ..... 7
   (b) India's inland waterways are not sufficiently developed; Reasons? ..... 8

7. (a) What are fishing Zones? ..... 5
   (b) Fishing Industry needs lot of improvement in India. Your inputs? ..... 5
   (c) 'Indian Sea foods' faces problems of acceptance/approval in USA/UK/Europe/Japan. Why? ..... 5

***************************
3a) Tide & Ocean Current

Tides at sea, caused by gravitational pull of the moon and to some extent by Sun. Also earth's rotation on its own axis.

As many plates, sea coast is having two high tides and two low tides normally (Spring tides, Neap tides).

Low tide levels are taken as reference point for assessing territorial and economic zone of a coastal state. Bore tides is a tide, when the sea floor water receding and entrance of high water creates a upheaval of tide level of water raising to even more than 10 feet.

Ocean current is caused by surface waves at sea due to difference in temperature, salinity of water, by winds effect, coriolis effect move like a conveyor belt, in their direction, currents at sea, causing changes in weather pattern and climate in their path. The respective region, currents in different ocean according to the region may be warm or cold.

In northern hemisphere, current pattern is in clockwise direction and in southern hemisphere, the current circulation is counter clockwise.
Naval Port & Bunkering Post

Naval Port is an exclusive post, utilised for Defence (Naval) vessels only, for the countries' security in consideration. No Commercial Ships are entertained for cargo work in these Posts. Naval Port, in entirety, is controlled by the Defence Department. Have Ship repair facilities, Dry docks etc., exclusively for Naval Vessel. Entry to the of other civilian personnel is restricted.

Naval Posts' drafts may not be on for with Commercial Port where in deep drafted vessels are camping and Unloading/Loading.

Bunkering Post

Bunkering Post is a Post where in Bunkering (Supply of fuel, lubricants are supplied to Commercial Vessels.

Many of the Cargo dealing Ports offer this bunkering service to the ships, in addition to the Commercial activity.

Normally the exclusive Bunkering Ports offer fuel & lubricants in competitive rates so that many ship owners are attracted to utilise this facility.
3(c) Seasonal Tropical Zone & Permanent Tropical Zone.

Permanent Tropical Zone

Zones around Equator, north & south of Equator say up to 30° latitude always remain Permanent Tropical Zone.

In Permanent Tropical Zone, Sea water temperature, Sea salt salinity & remains the Same without much variation.

Seasonal Tropical Zone

In North & South of Equator, the region above & below Centrizon, the Seasonally Tropical Zone are dotted sets in Summer Most of the time Tropical Zone and followed by Tropical Zone sets in Summer & another Summer almost period is established on account of this.

Pertinent April, May to Sept-Oct
Northern Zone experiences Summer and
at the same Southern Zone experiences Winter.

By the month October to March it's
Northern Zone, winter experienced and the same time Southern Zone experiences Summer.
OPEC — an organization, formed by major oil producing and exporting countries, to
control production (oil exploration) and content supply
in accordance to their lucrative
price of the oil maintained in the world
market. Many of the above countries,
though rich in oil content for other
required supporting goods, are dependent
on imports from various countries.

Presently, USA, another oil producer
state oil, considered not members of OPEC,
exported surplus oil, similar to which they were restricting
by themselves.

Even among the members of OPEC
presently, unity in oil production, controlling
import the output, is very much to be desired
due to certain political misunderstanding
etc.

GATT is an organization, formed early
20th century by developed countries like USA,
United Kingdom, Canada, France, Italy, Spain,
Germany etc. with the objective of ensuring
their trade needs.

The main objectives were to formulate
well-documented and enforced rules, to conduct trade
between member countries (b) to regulate financial
dealings and keep the economy in healthy condition.
(c) Have periodical dialogues by way of meetings
of member countries represented by their finance
ministers, central bank authorities etc.
After late 1980 as a follow up
to the above well laid, objectives UNCTAD
(United Nations Council for Trade and Development) was
formed. The reason for its formation is, since
only the developed countries were participating
GATT affairs, and economy in being regulated
to mutual advantages of member countries, and
such scenario, was not very realistic, purposeful
in the later years. Many of the developing
countries raised their economy in trade & development
which were having influence in world economy,
which were not even considered by GATT.
Countries like India, China, Asian Countries,
Some of the South American Countries, raised
their economy & GDP and increased their
export trade on many claim.
Hence there was a need, to
establish a new organisation UNCTAD
and keeping GATT objectives intact and enlarge
its scope, its activity to many developing
countries. UNCTAD is now in more democratic,
more globalized, taken considerate global
economy on trade, more realistically.
(AC) ASEAN is another trade group, focusing on trade and developmental interests of Asian countries, viz., Malaysia, Philippines, Burma, Cambodia, Japan, Indonesia, Brunei, Vietnam etc.

This trade body takes the interest on the needs and welfare of the people in the region and their trade requirements meet with their wants.

Other than the trade, the cultural cooperation, and coordination, among the member countries are also given importance.

ASEAN - organisation functions from Manila - Philippines.

Trade Related issues, namely, double taxation, liberal import & export tariffs, many Most Favored Nations Status for the member countries are also practiced so that import & export regimes are conducted in a very favorable, equitable manner, to all member countries.

As a body, ASEAN is also having coordination with other trade bodies, viz., EU, ACEM, European Union, NAFTA etc. to gain further advantage and of the people of the South East Asian Region.
(Sixth) European Union

A conglomeration of West European Countries, to further their mutual interests on the trade and development of the region and also to coordinate with other trade bodies, to further the objectives of their member countries.

Members: UK, Belgium, France, Germany, Italy, Sweden, Greece, Ireland, Portugal, Spain, Yugoslavia, etc.

They co-EU cooperate and coordinate with IMF, OECD, and with other trading blocs, to further the interest in trade and development, and for better living conditions of their people.

A common currency, "Euro", is used for their trade. Customs duties and other tariffs are considered, nationally, and for the member countries.

Movement of people, goods, and services are eased up for.

At present, UK one of the members,

Shying reluctance to continue with membership in UK, and recently referendum on this issue taken from people in UK. Perhaps, the UK feels deprived and not being benefited by the UK continuing with EU.
A Union or an Association of developed nations v/s USA, Canada, Germany, UK, France, Italy, Portugal.

It was G8 before with Russia as an additional member. Russia is now or not being considered in the affairs of G8 and it now it is G7 body of nations.

As expected, the member countries keen and focused on their trade pattern for mutual advantage. Relaxing trade barriers, offering Most Favored Nation to member countries, for export & import, offering Tariff reduction, for the goods movement between countries.

However, in Globalised Economy that exists today, on the event of developing nations like China, India, Brazil, South Africa, emerging into Economy powers, the functions of G7 it is very much in curtailed and not any more interdependent between member countries only. A new forum like UNCITRAL is better option, for world economy upliftment, considering equitable economic growth, to developing and developed countries.

G7 Countries, periodically, conducts meeting with Prime Ministers, Finance Ministers, Central Bank Government participants and finance, various economic unions of EU member countries and try to resolve them amicably.
ENTREPort. The term has come in vogue from the sail era, where in the endomism of sail ship is much less and required a port to discharge and re-load and sent to the destination.

In present condition, it is a port where in goods transhipment takes place for final delivery to destination.

The goods will not be attractively customs duty on port unload for transhipment and will be kept with in the port or in customs bonded stores and re-ship to the place of destination.

free trade zone in a zone around a port, imported goods are unloaded. Unloaded goods are re-assembled, value added, and repacked. They will not attract any customs duty. After reassembly the goods are packaged and re-shipped to destination to be sent.

This activity in free trade zone, increases economic activity of the region, employability of the region. A country with in must having direct trade with another country may benefit from the free trade zone facility of another country.
Coastal waters

Coastal waters is defined around as
as Coast water 12 Nautical Mile from Contour,
Coastal Shore, from the Reference of Low
Tide mark.

12 Nautical Mile, Coastal water

In exclusive, the coast of the country for economic
as well as navigation. Coastal ships operate
in that, which are built under Coastal Inland
Vessels Act, with less stringent rules on Structure, on
Certain equipment etc., but keep very
Infrastructure for Safe Operation of Coastal Ships.

Many of the Countries, utilize Coastal
Shipping, for the lower Mainland Goods transportation,
giving then importance Road/Rail transportation
Coastal main navigation and Goods movement is

cheaper, also environmentally friendly, leaving

lessen Carbon Foot Points.
Hinterland. Hinterland in the region, outside a port and accessible to port by rail and road connectivity.

Hinterland region may have a large industrial belt wherein industrial goods or agricultural produce can be accumulated, and if there is a need for transportation within country or to be exported, can reach port near by, to complete this transport supply chain.

In the age of Containerization, cargo movement, inland container terminal can be developed, in the vicinity of hinterland with cargo potential, and customs and other formalities can be completed in the ICD, and goods can be transported to Port for export or inland transportation.

Growth of economy will be well distributed, relatively, inland country.

Free Port in a port, no taxes are levied viz. customs duty. The goods come landing are unloaded, and the same is processed to finished goods, with the labor and machinery, available, which are planned out. The finished goods value added, with lesser cost, can be exported various, revenue in different countries.

Free port encourages, in the countries economic growth, employment generation etc.
Role Of Tide

Tidal Ports: example. In India Gujrat and Gujrat Ports, in Gulf of Kachchha and Gulf of Kutch. Vessels in variation in tides are maximum. Vessel loaded with high draft cannot enter the harbor, the vessel will try and take advantage of the tide and enter at high tide available in the harbor. And start unloading cargo and lighten the ship and draft of the vessel.

Reverse is true and when the vessel is loading to higher draft and load out only dump the max tide available.

In tidal ports dry docks, also some phonomena is used for beaching ships at dry dock, and carry out repair on ships.

Lumber load times are assigned to ships which are carrying timber as cargo. Timber as cargo, carried in holds of the ship and also carried on deck, as deck cargo.

Various timbers have different specific gravity and some have gravity less than the fresh water Sp gr. 1.026. They will float in the water.

When the Timber loaded in holds and on deck are cargo, and fastened as per rules requirement, with added buoyancy.
WRITE BELOW

6. (c) Continue

Ship Stability at Floating

Medium Coefficient

Free Board A

Free Board B

LTF

LT

LW

LNW

Free Port on Timber Line Marked will be less. In Fig. A - Free Board Marked is less from Main Deck line, for Timber Load to Other Cargo (already Free Board B). B is more.

This allowance lesser Free Board allowance is permitted, because of the characteristic of Timber as Cargo, which provides to the Ship some additional Reserve Buoyancy. For the Timber Carrier additional Gross Cargo Carrying Stability calculations are carried out.