



NAROTTAM MORARJEE INSTITUTE OF SHIPPING

MUMBAI

Main + 01 No. of Supplement = 02

Candidate's Name

Examination :- PGDSM - FIRST YR./ FINAL YR./ ASSOCIATESHIP / FELLOWSHIP

Month MARCH

Year 20 25

TOTAL MARKS

Subject GEOGRAPHY OF SEA TRANSPORT.

14
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Q	1	2	3	4	5	6	7	8	9	10	11	12	Total
M	12	15	14	13	14	\	\	\	\	\	\	\	69

WRITE BELOW

Q.3 a). IWAI : Inland waterways Authority of India.

STS : Ship to Ship Transfer.

ULCC : Ultra large Crude Carrier.

LPG : Liquefied Petroleum Gas

MGO : Marine Gas Oil.

MPEDA : Marine Products Exporting Development Authority.

DWT : Deadweight.

UTC : Universal Time Clock.

NACSA : National Community for Sustainable Aquaculture.

WNA : Winter North Atlantic.

EAEC : EurAsian Economic Community.

NVOCC : Non-vessel Operating.

b). COMMON DERIVATIVES OF CRUDE OIL.

→ For the formation of crude oil it requires Organic substances such as shale / limestone.

→ Organic substances like plankton, Algae which remain buried for million of years and are subjected to heat & pressure to form kerogen, which is a fluid which when further heated & pressurised forms the liquid or gaseous hydrocarbons.

→ It requires porous, & permeable rock matrix.

along with suitable climate, heat and pressure and thereafter impermeable rock materials like salt, so as to prevent further panning of liquid & to trap it so as to explore the crude oil.

Common Distillates include.

(1) Light Crude.

- light crude commonly have low sulphur content of $< 0.5\%$, also called as sweet crude.
- Found in North Sea, United States and Nigeria.
- Have low boiling point, low density & high API.
- Example: Naptha, Gas Oil, LPG, Aviation Fuel.

(2) Medium Distillate.

- Having high sulphur content $> 0.5\%$. also called as sour crude.
- Found in Gulf countries,
- Examples: Diesel oil, Lubricants.

(3) Heavy Distillate

- These are high density & low API crude oil found in Canada, Venezuela.
- These are used in the manufacturing plants of Aluminium and steel.
- Have high Boiling point.

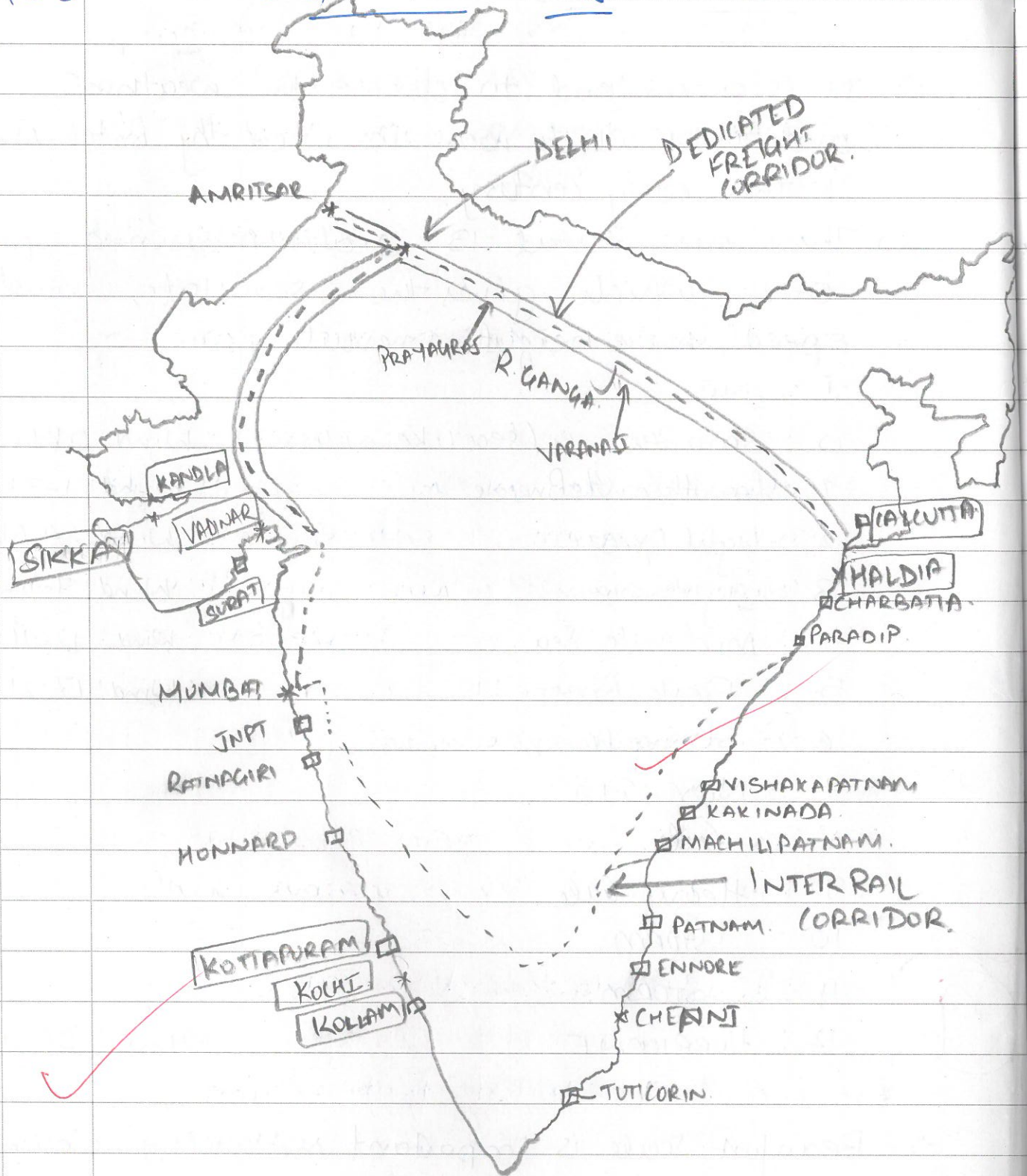
(iii). BEAUFORT SCALE

- It is a method to denote the weather conditions, which was invented by British Navy in the early century.
- There are total 13 scales measuring from 0-12, which gives the sea state, wind speed, wave height prevailing.

0	: Smooth. : (sea like a mirror).	: Wind: 0 Kts.
1	: Smooth Gentle Breeze	: Wind: 1-3 Kts.
2	: Light Breeze	: Wind: 4-6 Kts.
3	: Slight sea.	: Wind: 7-11 Kts.
4	: Moderate sea.	: Wind: 12-16 Kts.
5	: Fresh Breeze.	: Wind: 17-21 Kts.
6	: Strong Breeze	:
7	: Near Gale	:
8	: Gale.	:
9	: Heavy Gale.	:
10	: Storm.	:
11	: Storm.	:
12	: HURRICANE	: Wind: ≥ 65 Kts.

- Beaufort Scale is important method to describe the weather conditions prevailing at a particular place & forecasting the weather.
- The use of the Beaufort scale method has assisted in navigating through rough seas and storm and noting the weather conditions in the Deck log book and presenting to various authorities as and when required.

Q.59)

SAGAR MALA PROJECT

Ports in Gujarat: Kandla / Vadinar / Bandargah / Surat.
 Kerala: Kotiapuram / Kochi / Kollam.
 W. Bengal: Calcutta / Haldia.

→ Sagarmala project, a true India dream seen by ~~Dr.~~ former PM Shri Atal Bihari Vajpayee. and thereby been taken up by present govt under Shri Narendra Modi in the year 2015.

→ The project expects for development with investments above 6 lak crores.

→ Under the SAGARMALA Project ifollowing was discovered:

(1). Cabinet Secretariat of Minister of Shipping alongwith Secretary level position from various departments such as Police, Defence, Rail & Roadways, Revenue department under the National Perspective Plan (NPP) were given a task, to identify the developments required.

(2). It was noted that there is a need of a dedicated freight corridor. and an interrail corridor which will be there for the efficient movements of goods.

14 (3). Considering the length of coastline of 7519 Km, India's coastline only contributes 0.5% to its GDP. The coastline is the 4th longest in the entire world. Compared to Nethaland which contributes 41% and USA which contributes 28%.

(4) There is a need for development of various major ports and small ports along the coastline.

- (5). A need for warehousing and Container Freight Stations (CFSs).
- (6). Making the major ports a hub by having inter connection of rail, roadways and waterways.
- (7). Smart cities alongwith infrastructure been identified throughout the coastline Interconnected
- (8). Efficient use of the river of inland waterways for the transport of goods will give a boost to the logistics and Indian Economy.
- (9). Presently there are 6 inland waterways, also total 111 inland waterways have been identified and project for development is in progress.
- (10). Development for shipbuilding, ship repairs, ship scrap are required along the major ports of India.
- (11). Investments through Private sectors and govt incentives to boost the logistic sector.
- (12). Dredging of various ports and channel in order to allow large size vessels such as VEC/VLOC/VLCC for shipment.
- (13). Identification of the Free Trade Area (FTA) soon to get the area developed with infrastructure.

(14). Reduction of tariff and taxes by government.

(15). Support of IT industry for the infrastructure and automations.

(16) Development of fisheries, infrastructures for exporting marine products, necessary tools and arrangements.

Q.1. Done on map. - (a) & (b).

(c). Time Zone of Asian region Countries.

UK: GMT.

Germany: GMT+1.

Turkey: GMT+2.

Greece: GMT+2.

(a) Route of Suezmax ship from Hongkong to Port Said.

- The route will involve navigating through the South China Sea / East China Sea / Straits of Malacca / Indian Ocean / ~~Arab~~ Arabian Sea / Bab-al-mandeb / Red Sea Area / Suez Canal.

- On the North of the Suez Canal is the Port Said.

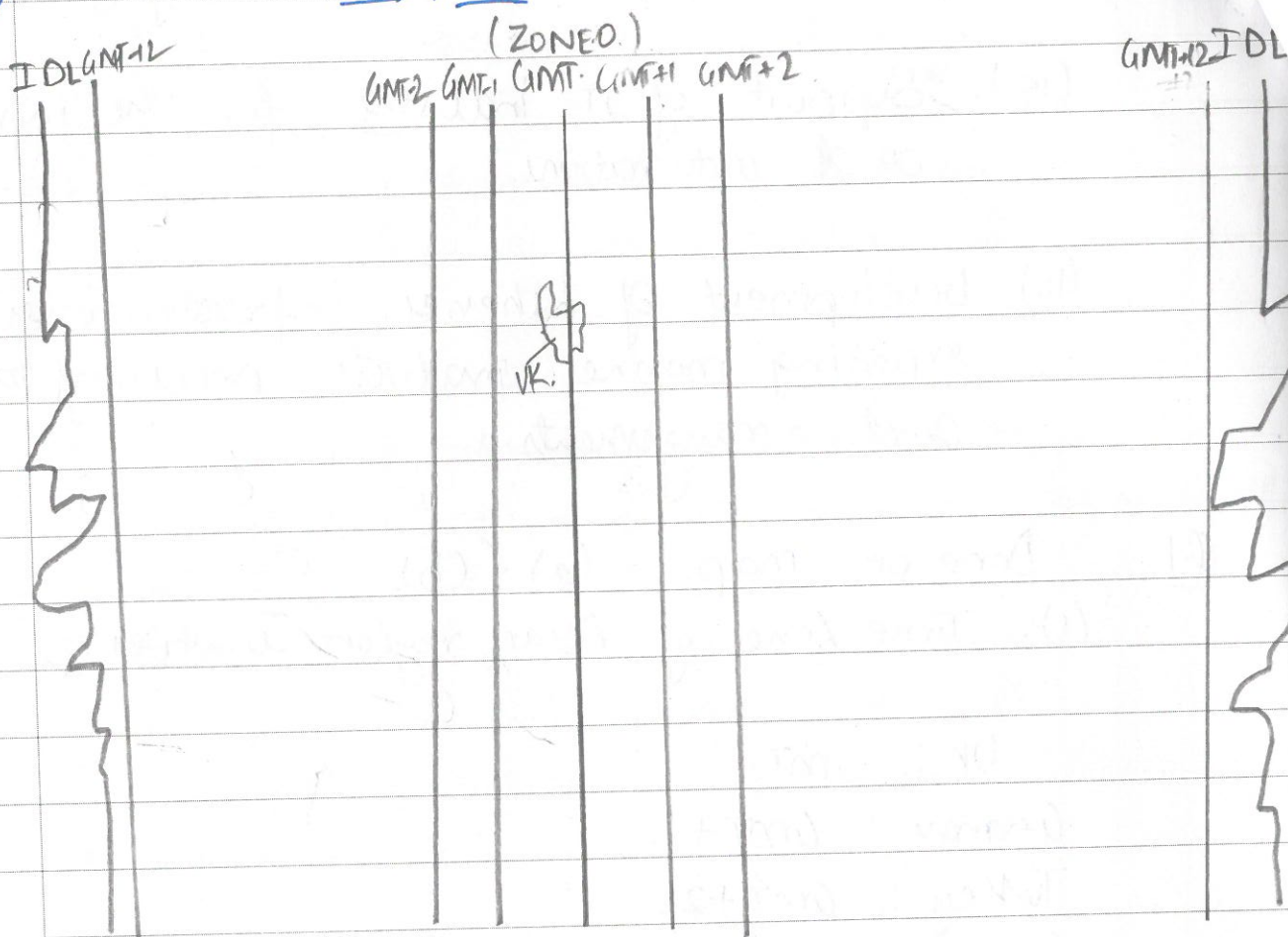
Q.2 (a). Two shipping canals. (Marked on the Map).

(i). Panama Canal - Joining Atlantic & Pacific Ocean.

(ii) Suez Canal - Joining Mediterranean Sea and Red Sea.

(b). Crude Oil Importing Countries : China / India.

Q.4.a).

TIME ZONES.

→ The entire world is divided into ²⁴~~22~~ zones.

each zone extending for 15 degree.

→ Therefore covering the entire globe of 360° in 24 zones.

→ $-7\frac{1}{2}^\circ \text{E}$ to $+7\frac{1}{2}^\circ \text{W}$: Zone 0.

likewise every 15° is added for the zone.

$0^\circ / 15^\circ / 30^\circ / 45^\circ / 60^\circ / 75^\circ / 90^\circ$ on the East and West respectively

→ Earlier, the time was noted by the passing of the sun, and only one solar time was used. However, as the civilization started, it started creating confusion as when it use to be 12 o'clock in the noon at ~~GMT~~ United Kingdom, it use to be midnight but still being the solar time use so it started developing confusion and thereby a need for a time zone was introduced.

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→ Thereby the a single time zone is to be maintained within the leg of 15° of a particular zone time.

→ Likewise in India, meridia of 82.5° passed through ~~of $5\frac{1}{2}^{\circ}$~~ . Therefore India maintains GMT : $+5\frac{1}{2}$.

→ For a common each country notes its time with respect to the Greenwich which is a place in the United Kingdom line of 0° meridian.

→ Similarly countries like USA/CANADA uses multiple zone times depending on the area.

13 a(ii). DAYLIGHT SAVING TIME.

→ Daylight saving time (DST), is by advancing the clocks by one hour in order to have a long day light in the summer time.

→ The system is used in countries like USA/Canada/Australia/New Zealand, as during the summer time there is longer days and shorter nights. In order to have it convenient it was considered to advance the clock in the ancient time.

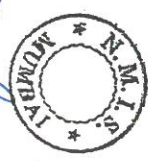
→ The Daylight saving time usually starts from 31ST MARCH of the year and ends in the October

→ For Example while the Central Time Zone of USA maintains GMT : -11. During the period of Daylight saving time. The time zone maintained is GMT : -10 until the DST period.

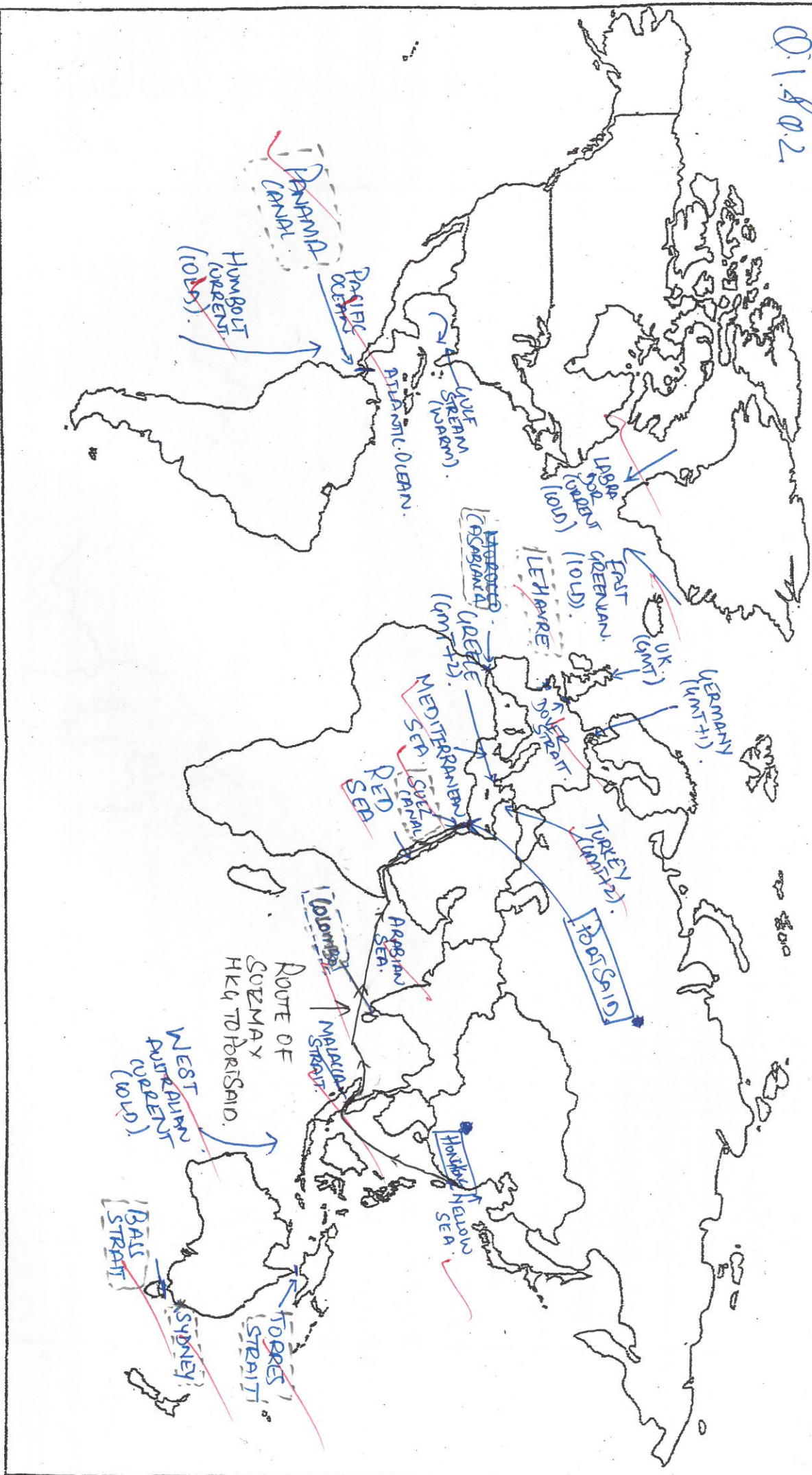
Q4(a) There are many theories and reasons behind considering the Daylight Saving. By advancing the clock for one hour. One could start the day early and getting the Natural light from the nature. resulting in using less of the artificial light and thereby saving the energy, fuel, electricity and working towards a green environment.

- Also it helps to have the darkness a bit early comparatively which is beneficial during summer time because of more time from sunrise to sunset and very less time from sunset to the next sunrise.

- However, many people debate and believe that this system of Daylight Saving was for ancient times when there was lack of artificial lightening and the sole purpose of it is gone in the present time.

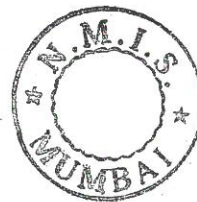


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which when further heated & pressurised forms the liquid or gaseous hydrocarbon hydrocarbons.

→ It requires porous, & permeable rock material