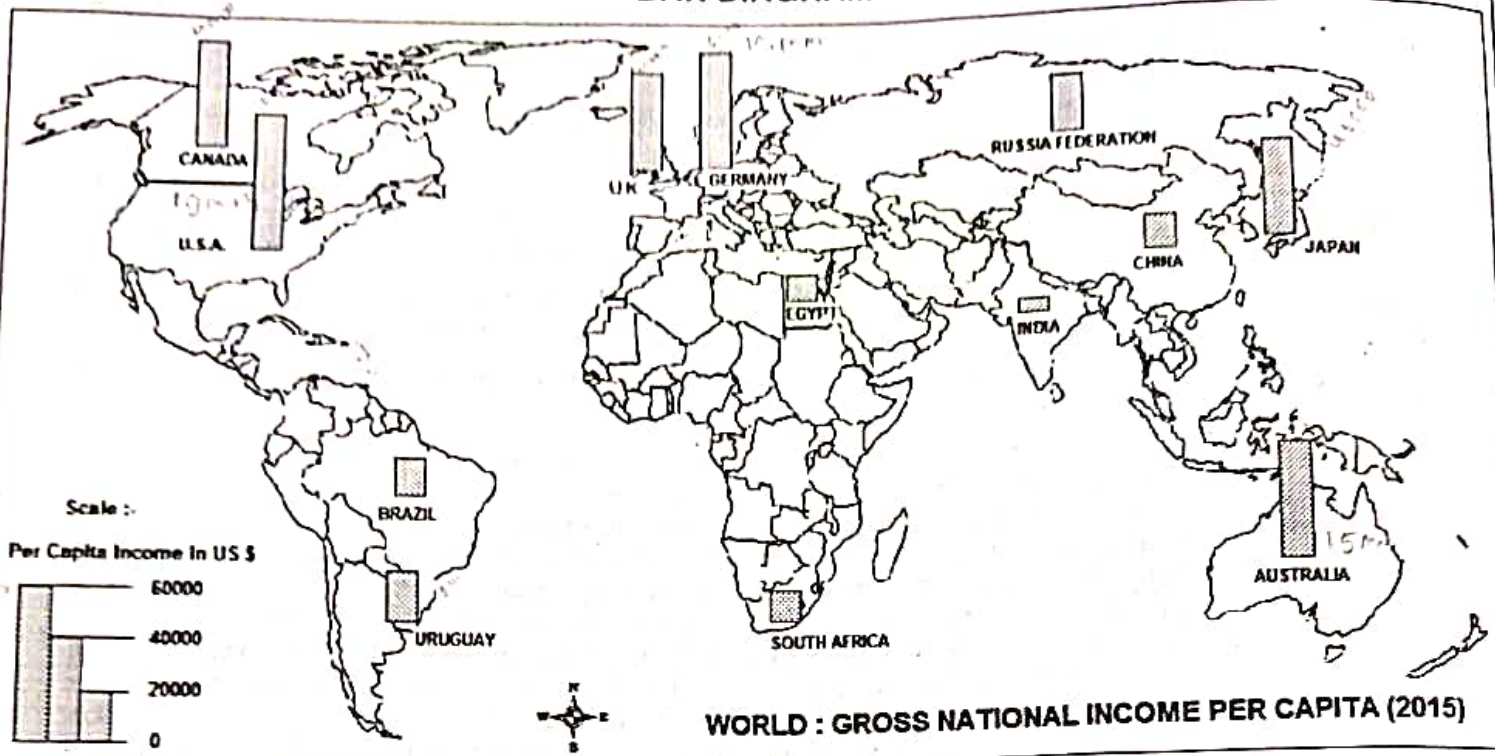


(2) LOCATED BAR DIAGRAM:

A bar diagram is a diagram in which data values are represented by horizontal or vertical columns. The relative lengths of the bars and columns show differences in trends.

BAR DIAGRAM



(1) What is the theme of the map?

World: Gross National Income Per capita (2015)

(2) Which cartographic technique is used to represent the theme?

Bar Diagram cartographic technique is used to represent the theme.

(3) Which country recorded the highest gross national income per capita in 2015?

U.S.A. country recorded the highest gross national income per capita in 2015.

(4) Which country recorded the lowest gross national income per capita in 2015?

India country recorded the lowest gross national income per capita in 2015.

(5) Find out the value for Japan.

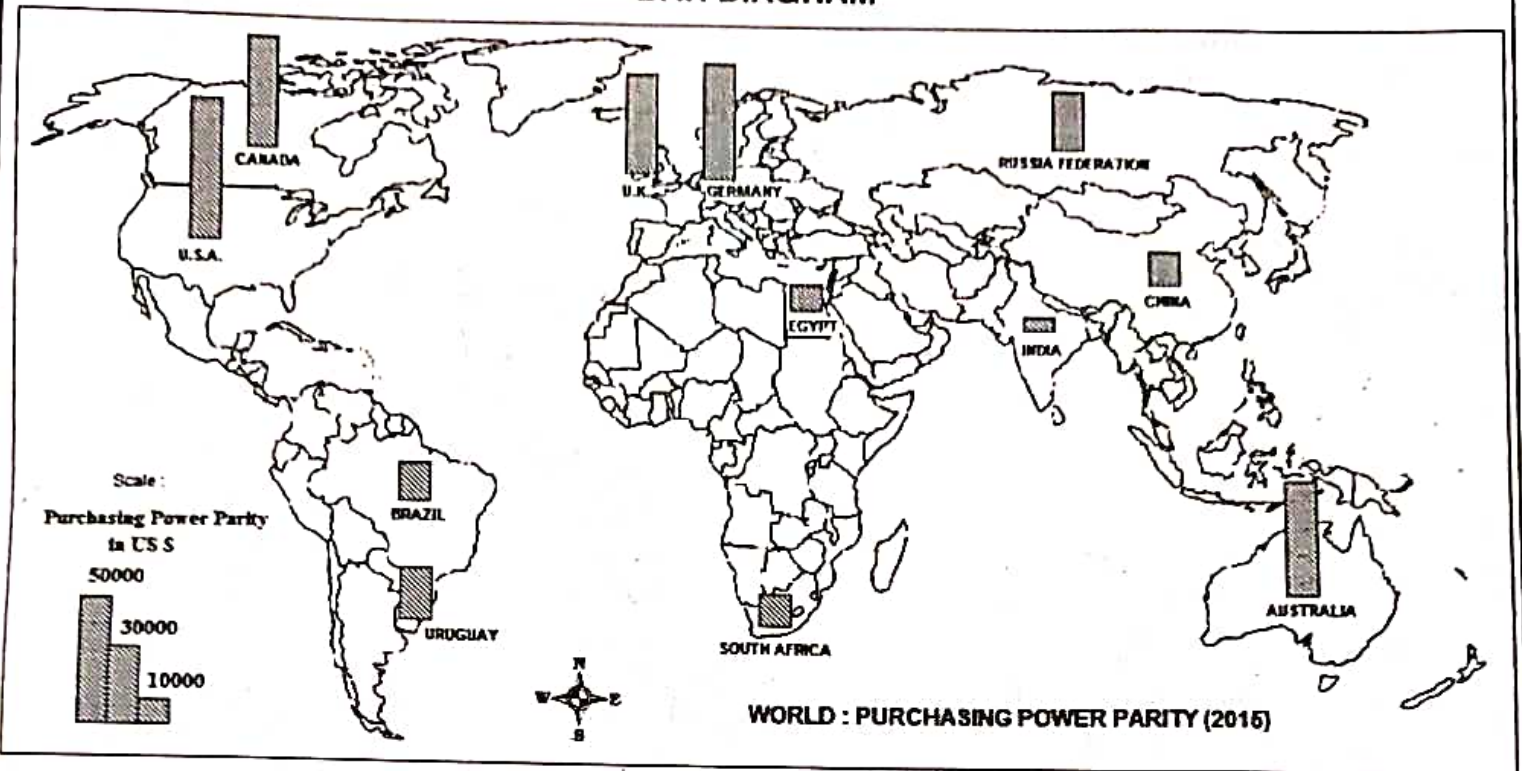
40,000

Japan: 12 mm
6mm = 20,000
12mm = 40,000

(5) $6 \text{ mm} = 20,000$
 $12 \text{ mm} = x$
 $12 \times 20,000 = 6 \times x$
 $2 \times 12 \times 20,000$

$2 \times 20,000$
 $x = 40,000$

BAR DIAGRAM



(1) What is the theme of the map?

World : Purchasing Power Parity (2015)

(2) Which cartographic technique is used to represent the theme?

Bar Diagram cartographic technique is used to represent the theme.

(3) Name the country which had purchasing power parity 10,000 US\$ in 2015.

Egypt country had purchasing power parity 10,000 US\$ in 2015

(4) Which country had the highest purchasing power parity in the Northern Hemisphere?

U.S.A. country had the highest purchasing power parity in the Northern Hemisphere.

(5) With the help of the scale find out the total purchasing power parity of the countries in the Southern Hemisphere.

Purchasing : 3mm = 10,000

Australia : 15mm = 50,000

South Africa : 4mm = 13,333

Brazil : 5mm = 16,666

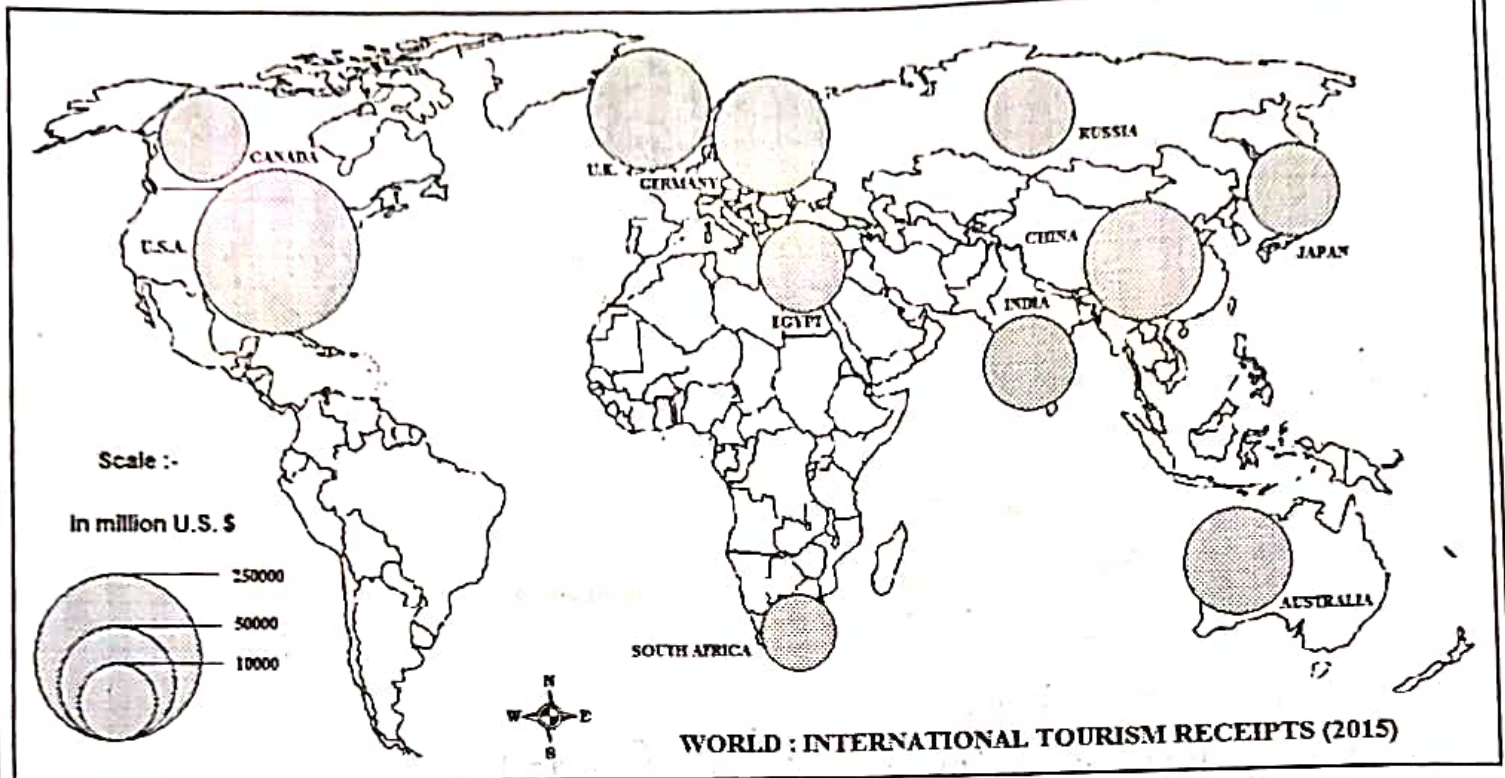
Uruguay : 7mm = 23,333

103332

(3) LOCATED CIRCLES:

Circular diagrams are most common. They are used to represent large variation of data. The basic principle underlying this diagram is that the area of the circle is made proportional to the quantity or number represented by it.

LOCATED CIRCLES



(1) What is the theme of the map?

World : International Tourism receipts (2015)

(2) Which cartographic technique is used to represent the theme?

Located circles cartographic technique is used to represent the theme.

(3) According to the map which country shows the highest International Tourism Receipts in 2015?

U.S.A. country shows the highest international tourism receipts in 2015.

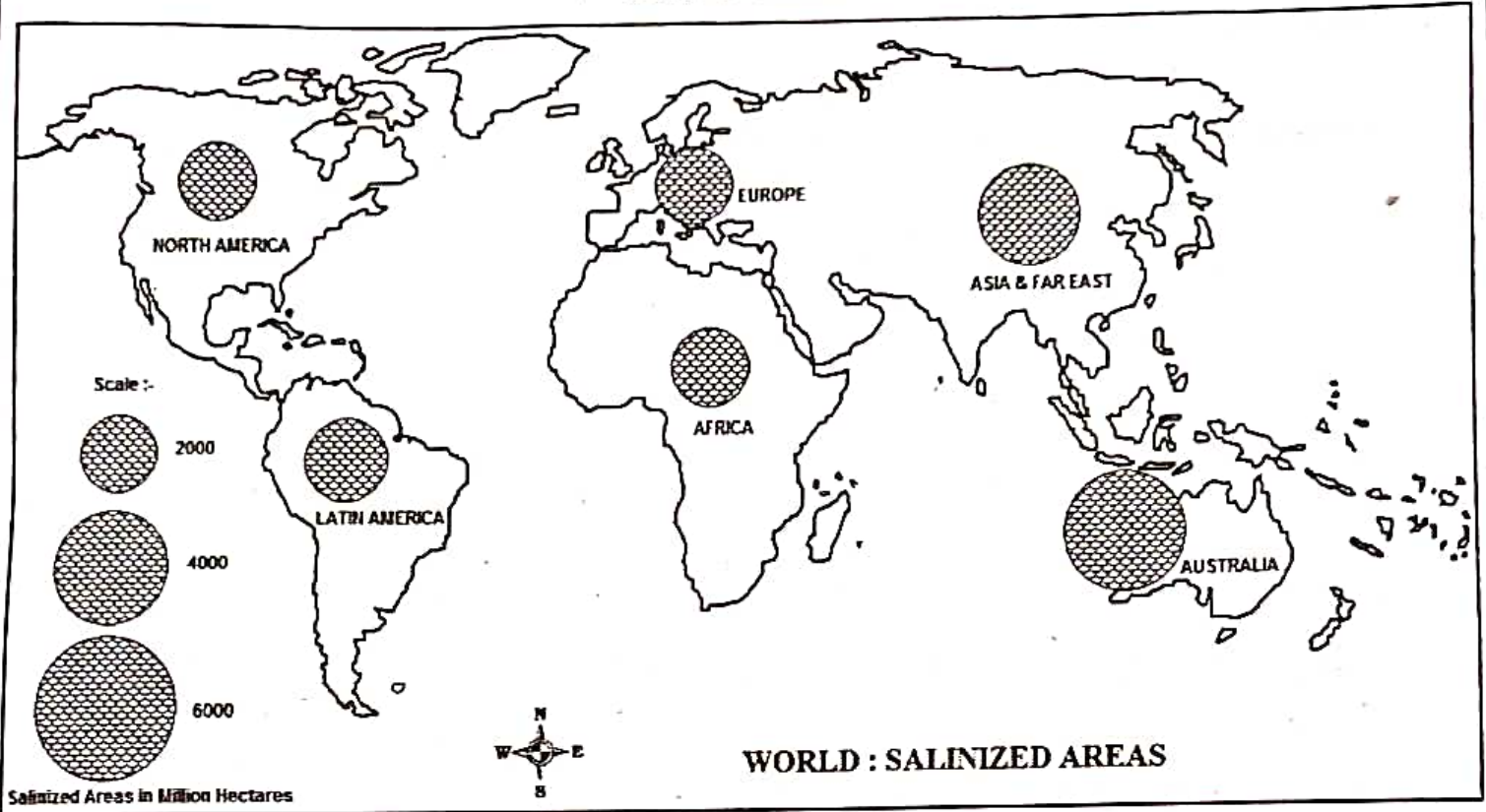
(4) With the help of the scale find out the total International Tourism Receipts of the countries of Southern Hemisphere.

Total international tourism receipts of the countries of Southern hemisphere is 16000 million U.S. dollars.

(5) According to the map which country shows the lowest International Tourism Receipts in 2015?

South Africa country shows the lowest International Tourism Receipts in 2015.

LOCATED CIRCLES



(1) What is the theme of the map?

World: Salinized Areas

(2) Which cartographic technique is used to represent the theme?

Located Circles cartographic technique is used to represent the theme.

(3) According to the map which continent shows the highest salinized areas of the world?

Australia continent shows the highest salinized areas of the world.

(4) According to the map which continent shows the lowest salinized areas of the world?

Africa continent shows the lowest salinized area of the world.

(5) Compare the total salinized areas under Asia & Far East & Africa.

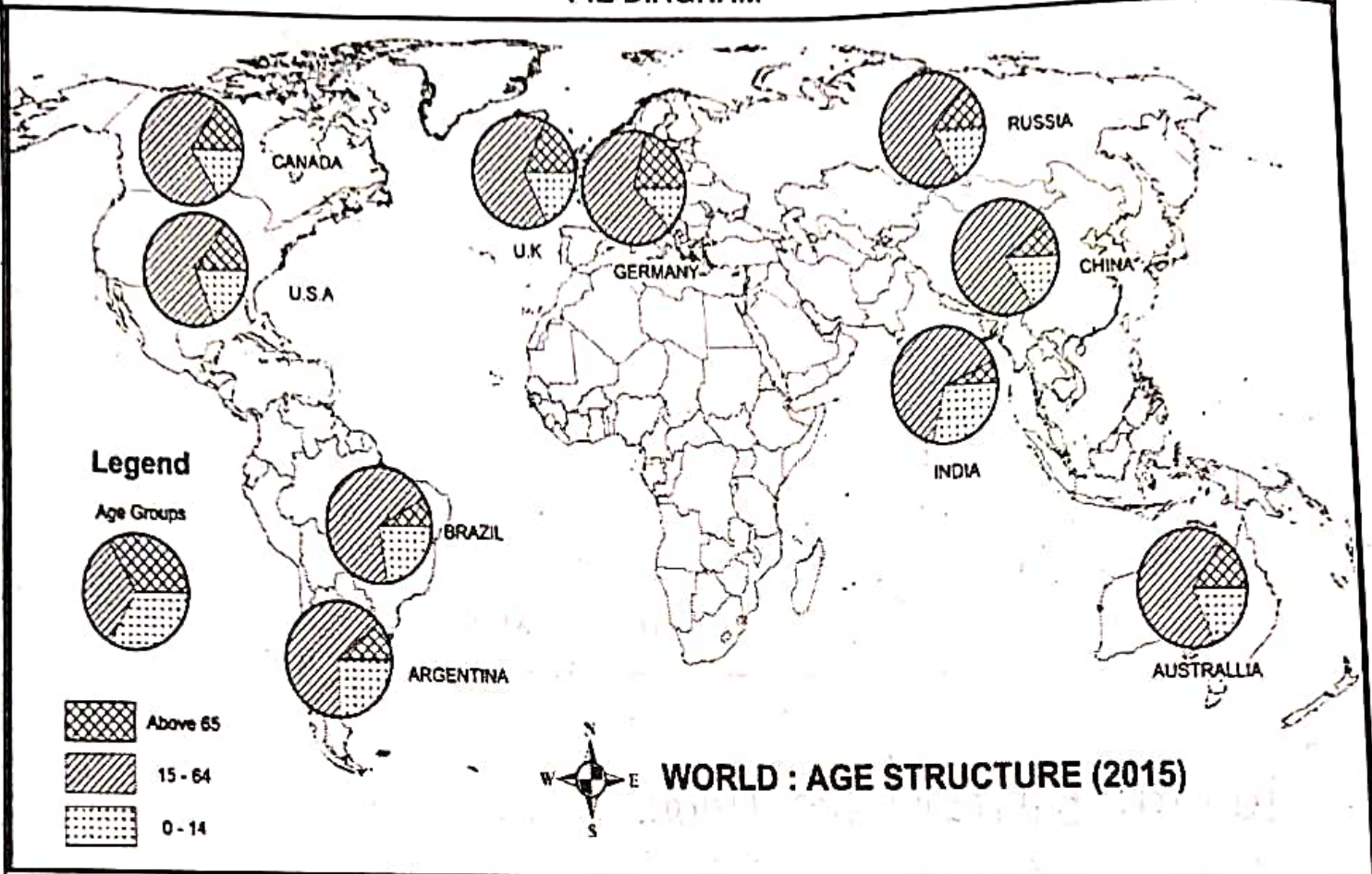
Asia & Far East salinized areas 4000 And Africa salinized areas 2000

Asia & Far East is more than Africa 2000. And Africa is less than Asia & Far East 2000.

(4) LOCATED PIE DIAGRAM:

It is a diagram shaped like a sliced pie in which percentage values are represented as proportionally sized slices used to represent the relationship between parts and the whole.

PIE DIAGRAM



(1) What is the theme of the map?

World : Age Structure (2015)

(2) Which cartographic technique is used to represent the theme?

Pie Diagram cartographic technique is used to represent the theme.

(3) According to the map, which country shows the maximum percentage of elderly population?

Germany country shows the maximum percentage of elderly population.

(4) With the help of the scale, find out the percentage of population between the age group of 15-64 years in China.

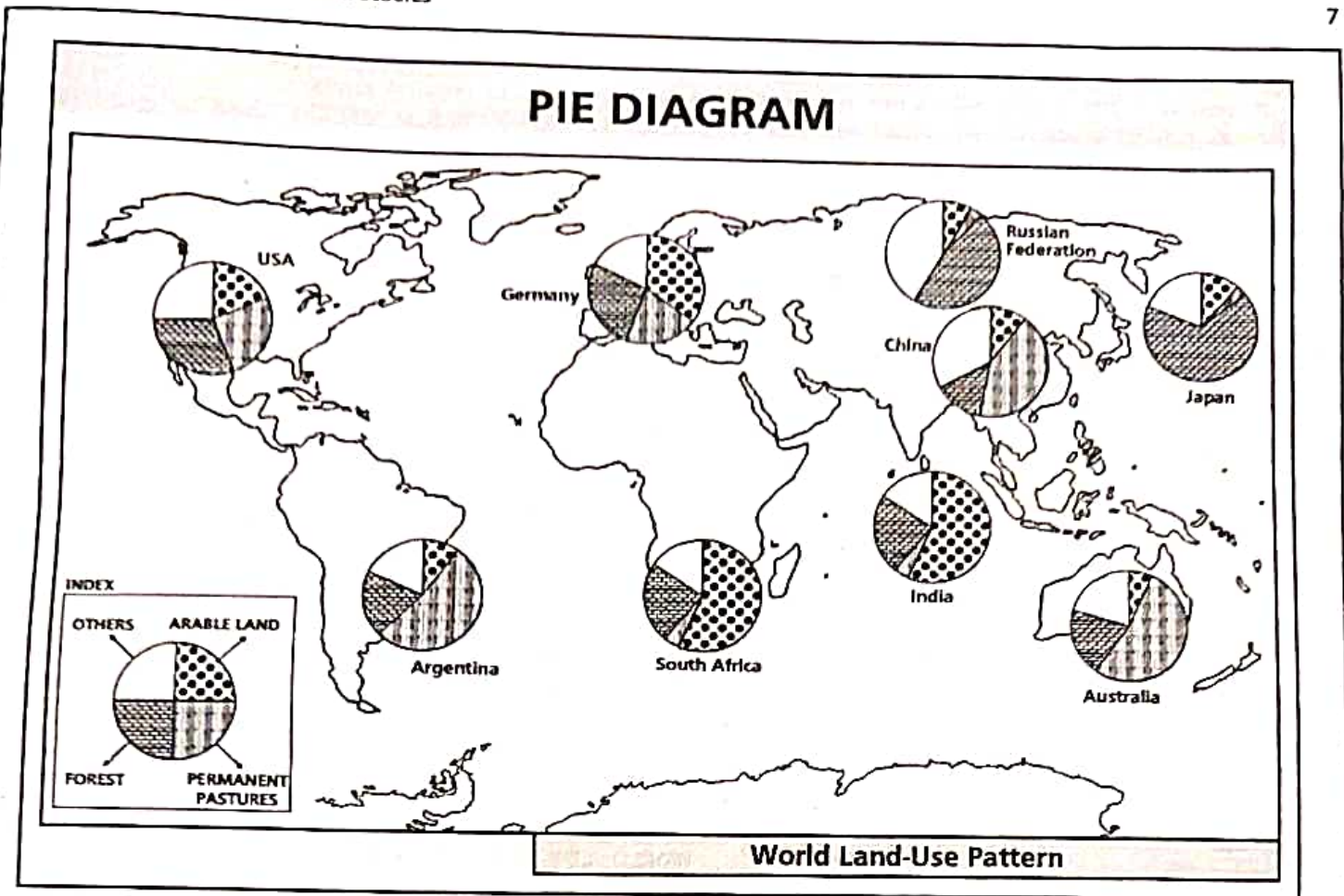
69.44% of population between the age group of 15-64 years in China.

(5) State the composition of age structure of Indian population.

Indian has young generation 15-14 age.

$$\begin{array}{r} 360 \\ 110 \\ \hline 250 \end{array}$$

$$\frac{250}{360} \times 100 = 69.44\%$$



(1) What is the theme of the map?

World Land-use Pattern

(2) Which statistical technique is used to represent the theme?

Pie Diagram statistical technique is used to represent the theme.

(3) Which country shows the highest area under forest?

Japan country shows the highest area under forest.

(4) Which countries have more than 50% land under permanent pastures?

Australia and Argentina countries have more than 50% land under permanent pastures.

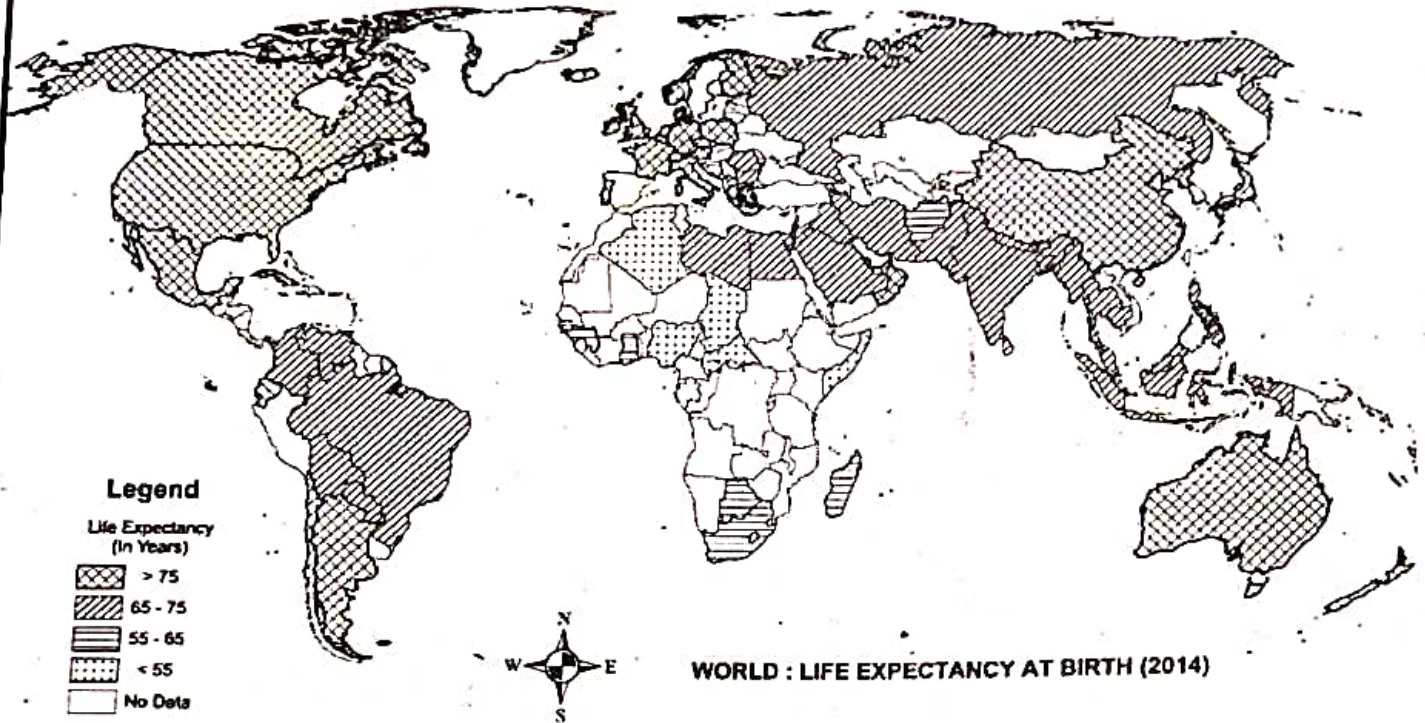
(5) Compare the land use pattern between India and China.

The arable land India is more than china and Permanent pastures is more china.

(5) CHOROPLETH:

A thematic choropleth map is one in which areas are coloured or shaded to reflect the density of the mapped phenomenon or symbolize classes within it. Choropleth Map is usually used to represent continuous phenomena with abrupt variation.

CHOROPLETH MAP



(1) What is the theme of the map?

World: Life expectancy at Birth (2014)

(2) Which cartographic technique is used to represent the theme?

Choropleth map cartographic technique is used to represent the theme

(3) Name the Asian country having life expectancy at birth above 75 years.

U.S.A. Mexico, China country having life expectancy at birth above 75 years

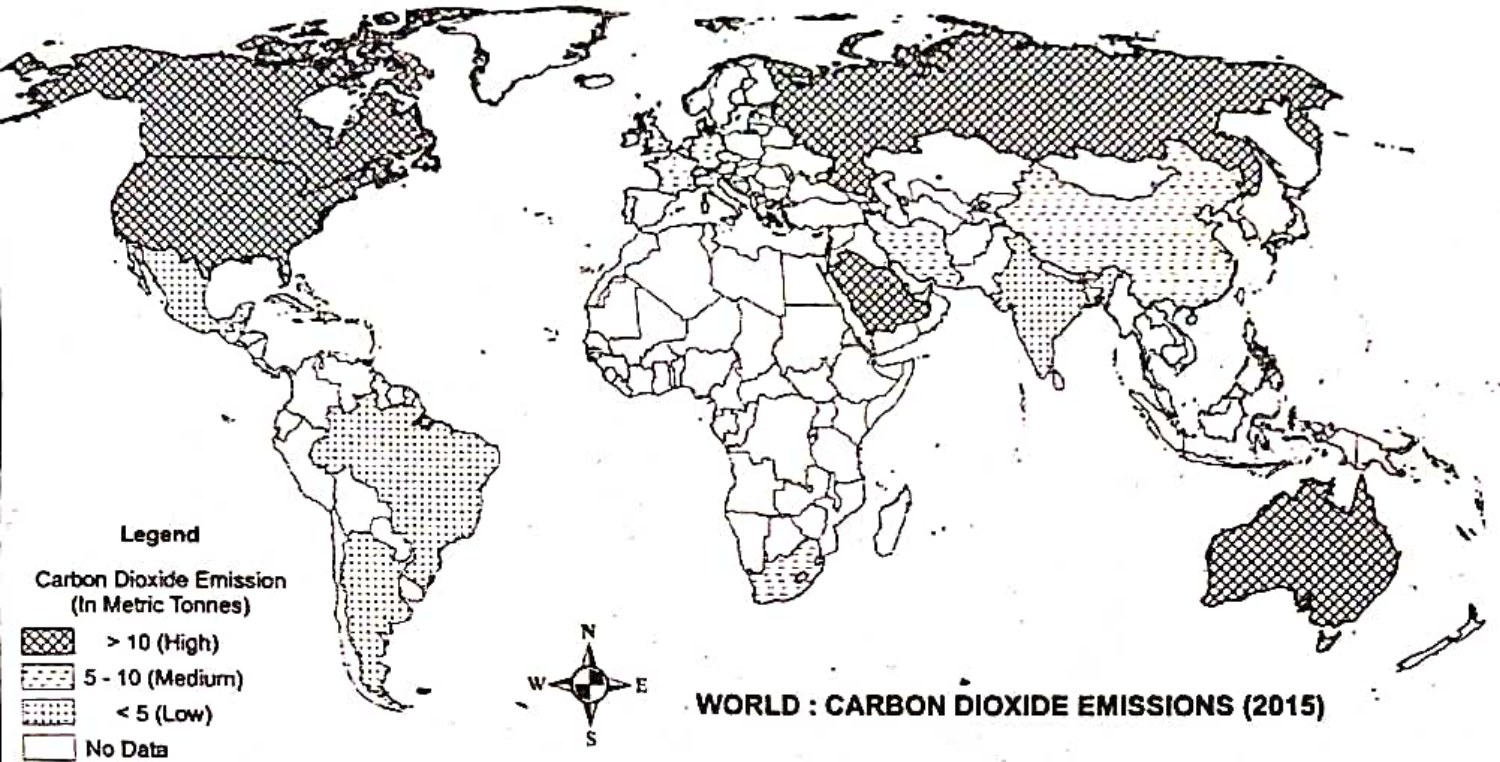
(4) Find out the Life Expectancy of Indian population.

Life expectancy of India population 65-75

(5) Name any one country of Southern Hemisphere having Life Expectancy between 65-75 years.

Brazil one country of Southern Hemisphere having life expectancy between 65-75 years

CHOROPLETH MAP



(1) What is the theme of the map?

World : Carbon Dioxide Emissions

(2) Which cartographic technique is used to represent the theme?

Choropleth map cartographic technique is used to represent the theme

(3) With the help of the scale find out the CO₂ emission in India.

Carbon Dioxide emissions in India < 5 metric tonnes

(4) Which countries in the Southern Hemisphere had emission rate less than 5 metric tons?

Brazil and ~~Arg~~ Argentina in the southern hemisphere had emission rate less than 5 metric tons.

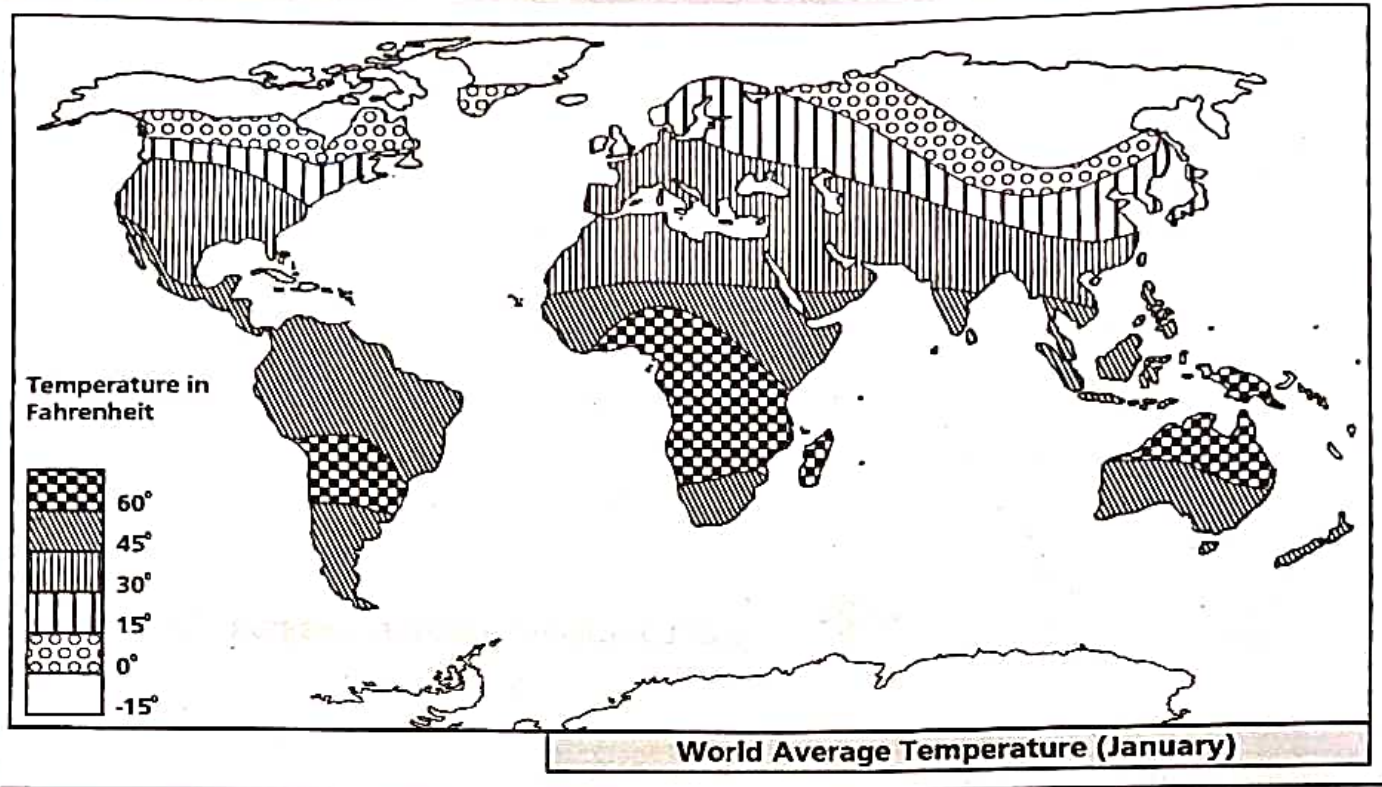
(5) Name the Asian country having CO₂ emission more than 10 metric tons.

Russia the Asian country having CO₂ emission more than 10 metric tons.

(6) ISOPLETH:

It is a line connecting points of equal value on a surface.

ISOPLETH MAP



(1) What is the theme of the map?

World Average Temperature (January)

(2) What is the technique used to represent the map?

Isopleth map is the technique used to represent the map.

(3) Which hemisphere is having cooler weather?

Northern hemisphere is having cooler weather.

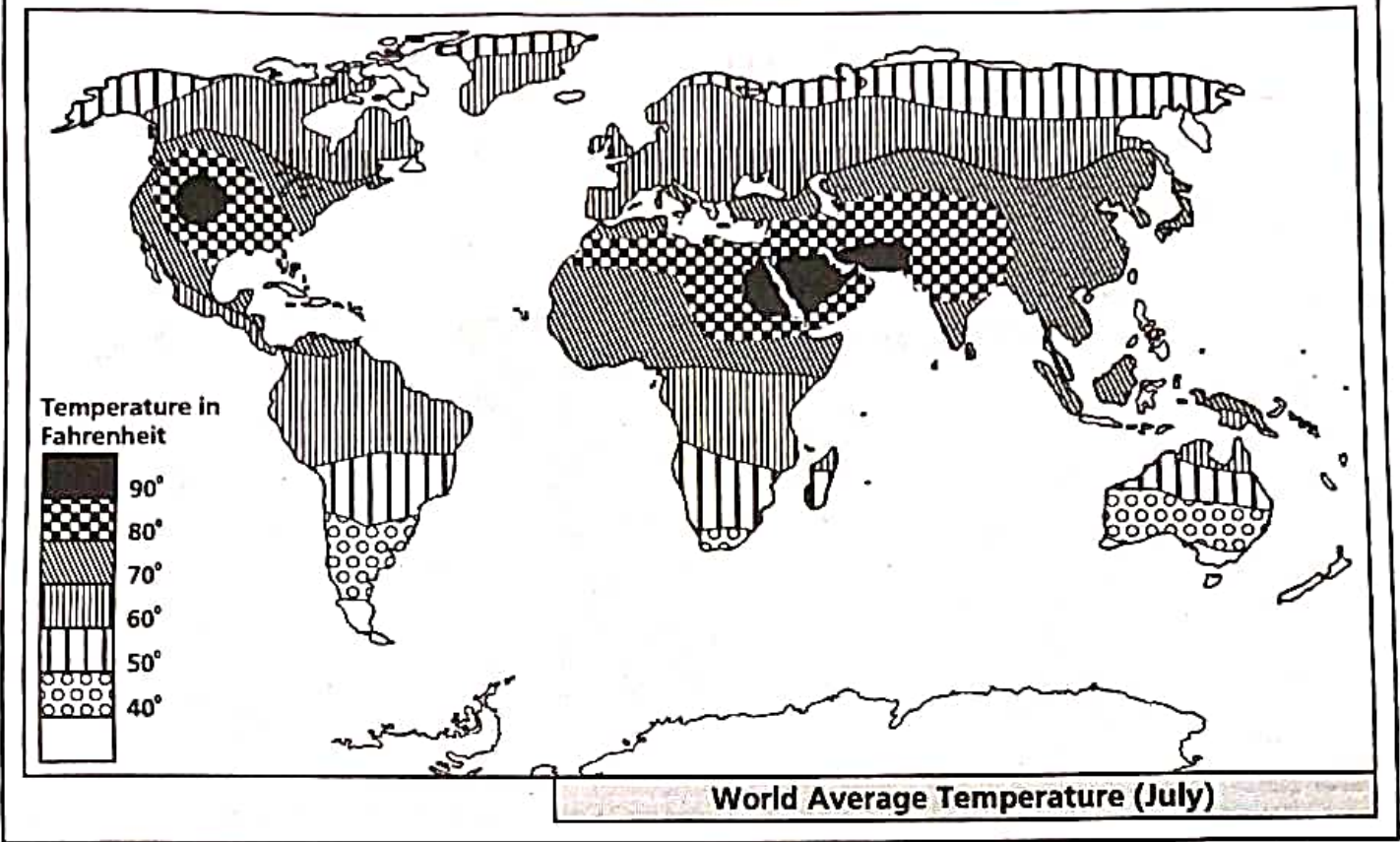
(4) Write about the temperature distribution for India.

Northern India is temperature 30° and southern India is having 45° temperature.

(5) Write about the temperature distribution for Africa.

North most part of Africa 30° and central part of Africa 60°F and southern most part of Africa is 45°. And central part of Africa is most hot.

ISOPLETH MAP



(1) Which are the areas having temperature above 90°F?

U.S.A., Egypt, Iran, Iraq

(2) What is the average temperature for China?

$75^{\circ}\text{F} \hat{=} \frac{70 + 80}{2} = 75^{\circ}$ is the average temperature for China.

(3) What is the temperature variation for the equatorial belt?

The temperature variation for the equatorial belt is 60° to 70°.

(4) Which hemisphere is having summer season?

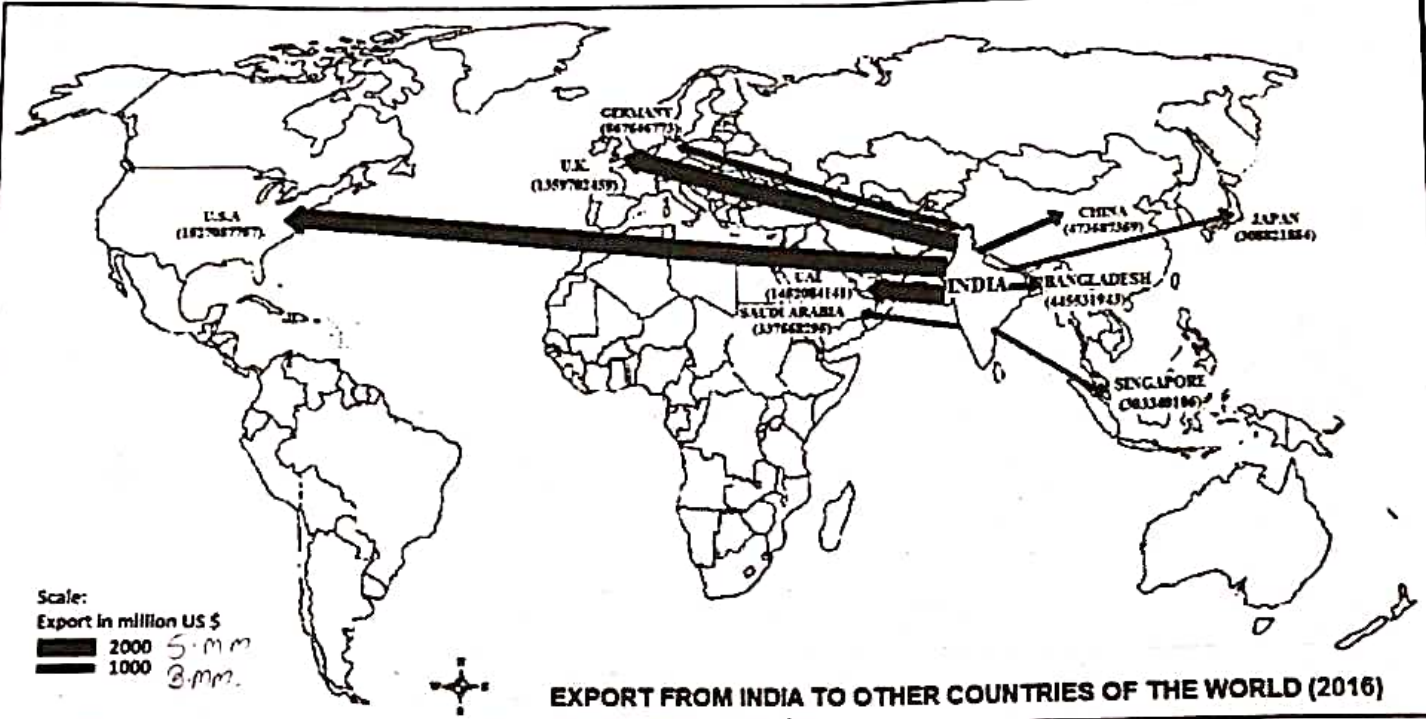
Northern hemisphere is having summer season.

(5) Write about the temperature distribution of Australia.

North part is 60° temperature and central part 50° temperature and southern part is 40° temperature. Northern part of temperature is most hot.

(7) FLOW MAP:

A map that uses line symbols of different thickness, to show the proportion of traffic or flow within a network.

FLOW MAP

(1) What is the theme of the map?

Export From India To Other countries of the World (2016)

(2) Which cartographic technique is used to represent the theme?

Flow map cartographic technique is used to represent the theme.

(3) With the help of the scale determine the export from India to U.K.

Export from India to U.K. in 2016 is 2000 U.S.A. dollars US \$

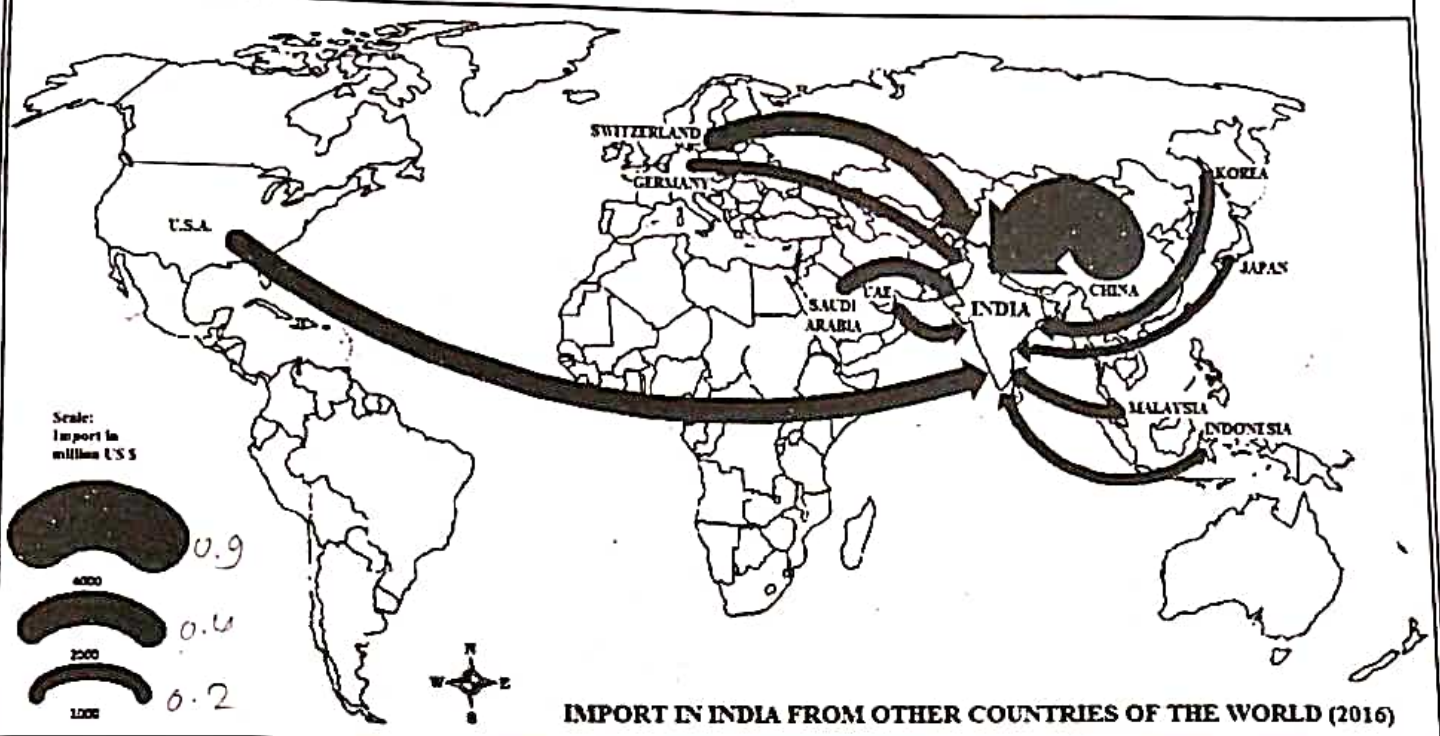
(4) According to the map which countries are the major export partners of India?

U.S.A., U.K. (UAE) ~~U.K.~~ this country major export partners of India

(5) Name the countries with which India has least export trade.

Japan, Singapore, Saudi Arabia this country India has least export trade

FLOW MAP



IMPORT IN INDIA FROM OTHER COUNTRIES OF THE WORLD (2016)

(1) What is the theme of the map?

Import In India from other countries of the world (2016)

(2) Which cartographic technique is used to represent the theme?

Flow map cartographic technique is used to represent the theme

(3) Who is the major import partner of India?

China is the major import partner of India

(4) With the help of the scale determine the total import of India from China.

Import from china = 10mm = 2mm = 1000 US \$ 10mm = 5000 US \$ the total import from china = 5000 US \$

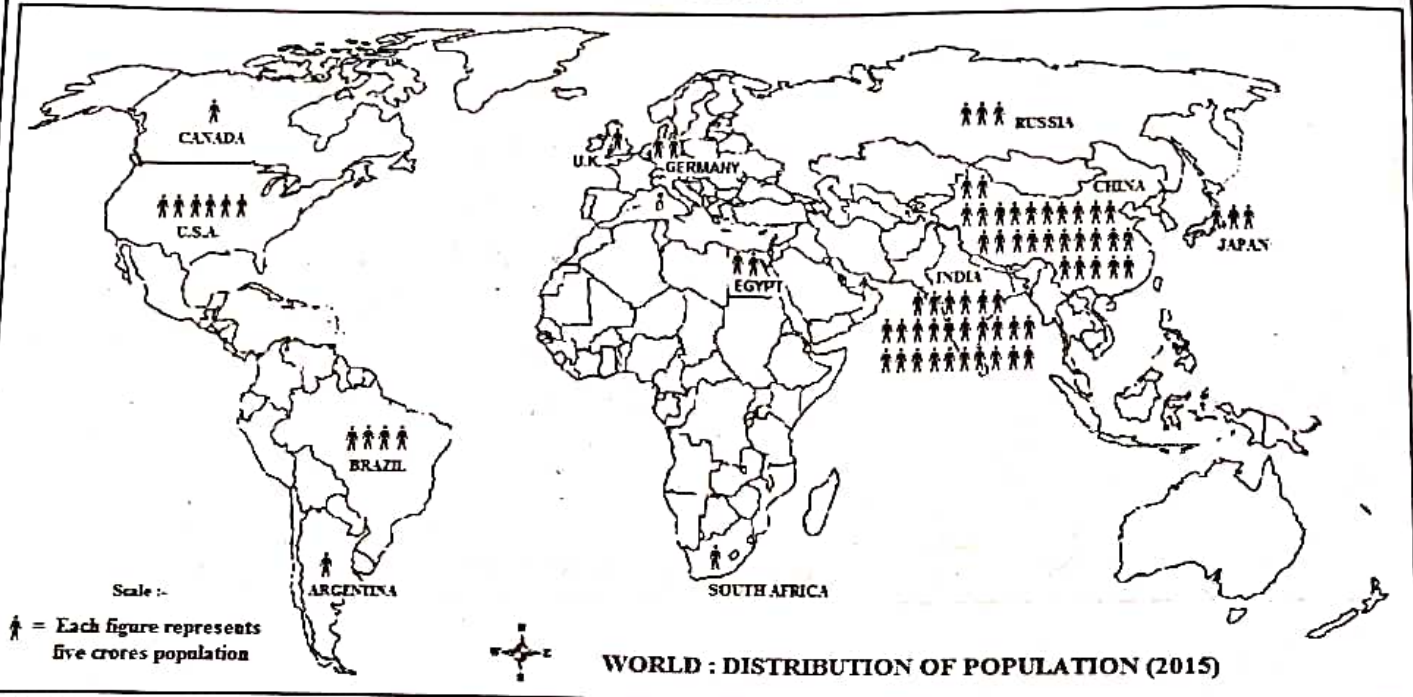
(5) Determine the total import of India from the Asian countries.

The total import of India from the Asian countries 10,000 US \$

$$\begin{array}{l}
 2\text{mm} = 1000\text{ US \$} \\
 10\text{mm} = 5000\text{ US \$} \\
 \text{China} = 5000 \\
 \text{Japan} = 500 \\
 \text{Korea} = 1000 \\
 \text{Malaysia} = 1000 \\
 \text{Indonesia} = 500 \\
 \text{SAUDI ARABIA} = 1000 \\
 \text{U.E.A} = 1000 \\
 \hline
 10,000
 \end{array}$$

(8) PICTOGRAM:

A map that uses picture of the product to represent the availability and quantity or value in a specific area.

PICTOGRAM

(1) What is the theme of the map?

World : Distribution of Population (2015)

(2) Which cartographic technique is used to represent the theme?

Pictogram cartographic technique is used to represent the theme.

(3) Find out the population size of China.

Population size of China in 2015 135 Crores (27 x 5) = 135 cr.

(4) Compare the population size between India & China.

India population size less than 5 crore China (26 x 5) = 130 cr.

(5) Which South American country in the map shows higher population size?

Brazil South American country in the map shows higher population size.

(9) INTRODUCTION ON MAPS:

A Map is a diagrammatic representation of an area on the earth showing physical features, cities, roads, forests, water bodies, mountains and many other features. Maps present information about the world in a simple, visual way. They teach about the world by showing sizes and shapes of countries, locations of features, and distances between places. A map describes spatial relationships of specific features that the map aims to represent. There are different types of maps that attempt to represent specific things. Maps can display political boundaries, population, physical features, natural resources, climates, topography, and economic activities. Maps are produced by cartographers. Cartography refers both the study of maps and the process of map-making.

There are several types of maps. Each map show different information. Most maps include a compass which indicates which way is north, south, east and west. They also include a scale so you can estimate distances.

Climate maps give general information about the climate and precipitation (rain and snow) of a region. Cartographers, or mapmakers, use colors to show different climate or precipitation zones.

Economic or resource maps feature the type of natural resources or economic activity that dominates an area. Cartographers use symbols to show the locations of natural resources or economic activities. For example, oranges on a map of Florida tell you that oranges are grown there.

Physical maps illustrate the physical features of an area, such as the mountains, rivers and lakes. The water is usually shown in blue. Colors are used to show relief—differences in land elevations. Green is typically used at lower elevations, and orange or brown indicate higher elevations.

Political maps do not show physical features. Instead, they indicate state and national boundaries and capital and major cities. A capital city is usually marked with a star within a circle.

Road maps show major or minor highways arterial roads, airports, railroad tracks, cities and other points of interest in an area. People use road maps to plan trips and for driving directions.

Topographic maps include contour lines to show the shape and elevation of an area. Lines that are close together indicate steep terrain, and lines that are far apart indicate flat terrain.

All map symbols can be classified into:

- (a) Point Symbols
- (b) Line Symbols
- (c) Area Symbols.

Point symbols are basically used to represent various features or data at particular locations. Dots, squares, crosses etc. can be used to locate the points on the map. For e.g. on a city map hospitals or schools and colleges can be represented by point symbols. On a topographic map peaks can be pointed out in dots or squares

Line symbols are used in the maps to represent physical features like roads, rivers, railways etc. Line symbols may also vary in thickness depending on its significance. It may be constructed by series of dots, or dashes or combination of both. Line symbol can represent rivers, roads or transport lines in a map.

Area symbols are used to depict features which cover areas too large to be represented by points. Lakes, forest, parks, reserves are examples of areas depicted by boundaries, colours or shades.

Point symbols

Distinguished by shape _____ ● □ + ◆ △

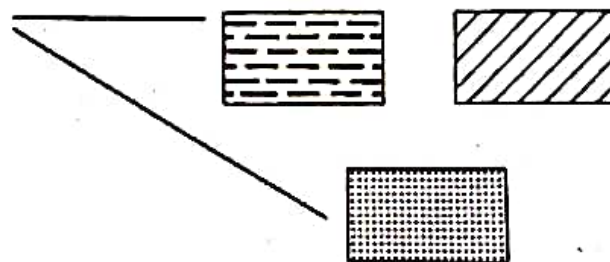
Distinguished by size _____ ○ ○ ○

Distinguished by orientation _____ △ ▽ = | + ×

Line symbols



Area symbols



(10) ENVIRONMENTALLY SIGNIFICANT FEATURES OF THE WORLD: INTRODUCTION

Environmental issues at global/national/local levels are gaining immense significance in present days.

Rapid growth of human population has caused tremendous pressure on existing resources. Many of the essential resources for sustaining life like fertile soil, clean water, energy, minerals and biodiversity are getting exhausted at a very fast rate. Pollutants released into air and water along with increasing amounts of toxic and hazardous wastes created by our industrial society are causing damages to the life support systems. Global warming and climate change, ozone depletion, acid rain, desertification, deforestation, biodiversity destruction etc. are becoming significant environmental problems. Moreover, resource depletion, poverty, inequality, diseases also have emerged as major issues of concern.

Environmentally significant features are those which have been identified as significant and worthy to note for the protection of ecology, hydrology and geology. Large water bodies, wetlands, forests, habitat of species are facing acute problems of pollution and over exploitation.

Due to the lack of scientific understanding of complex ecosystems, we are continuously facing challenges. However, today people have become more and more concerned about sustainable development. Many governments, NGOs and citizens' groups are playing proactive role in reducing pollution, creating environmental awareness or better environmental management.

The young generation is to be sensitized regarding various kinds of environmental degradation and significance of maintaining environmental quality. Thus maps of diagrammatic presentation of the environmental issues are being used as more effective tools of information.

Some of the critical environmental concerns:

(I) Global Acid Rain Pollution:

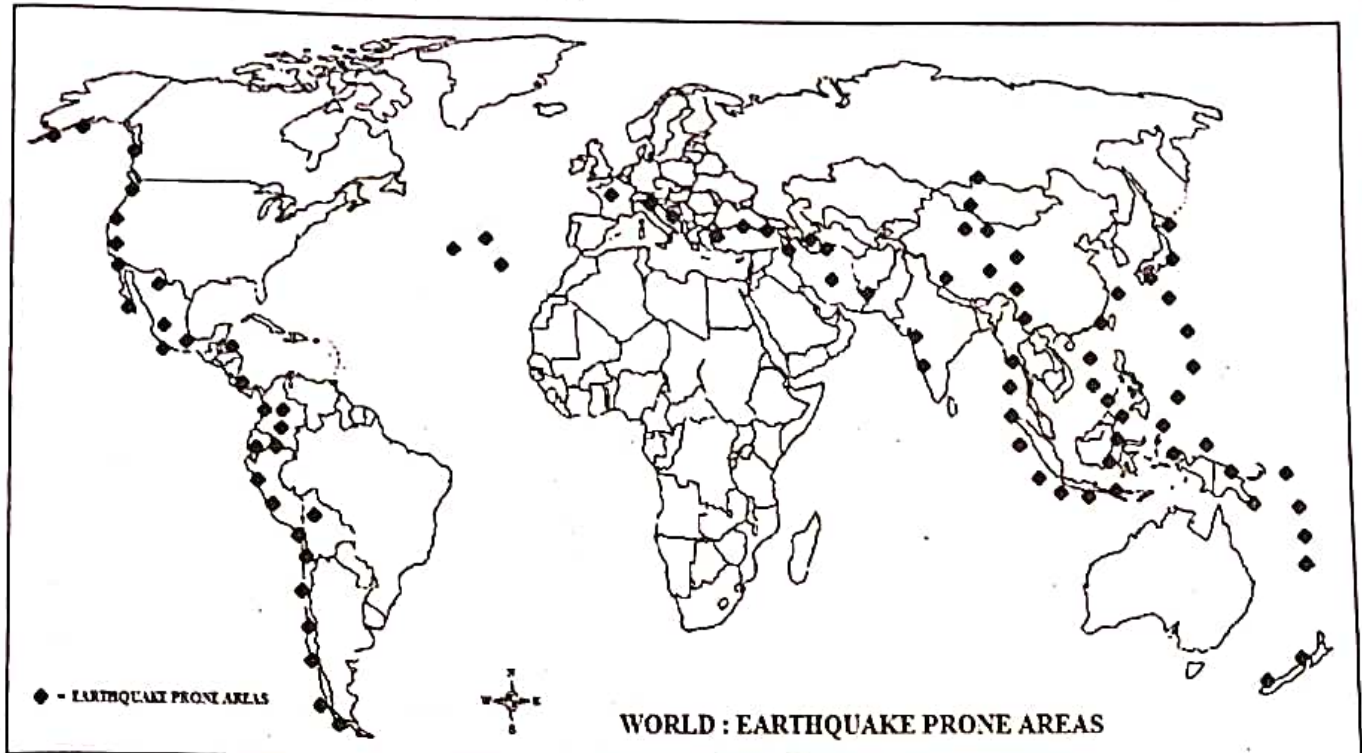
- (i) **Heavily affected areas:** South-East Canada and North-East USA, Western, Central and Northern Europe, Eastern China.
- (ii) **Moderately affected areas:** Western USA, South-East Brazil, South-East Africa.
- (iii) **Could be affected areas:** South-East USA, Central America, Southern and Eastern Europe, Ivory Coast of Africa, Pakistan, Japan, Java Island.

(II) Areas Experiencing Desertification:

Western part of USA, Western part of South America (Peru and Chile), Western Argentina, Sub-Saharan Africa, East Africa, Southern Part of Africa, Middle-East, Central Asia, Western part of India, Central part of Deccan in India, Northern and Western China, Mongolia, major parts of Australia.

(III) Some of the Endangered Species:

- | | |
|--|--|
| (1) Grizzly Bear and Woodland Caribou in Northern Canada. | (2) Californian Condor. |
| (3) Whooping Crane in Southern USA. | (4) Bald Eagle in East-Central USA. |
| (5) Atlantic Ridley Turtle along the coast of Florida in USA. | (6) Howler Monkey in Central America. |
| (7) Jaguar in Amazon Basin of Brazil. | (8) Galapagos Tortoise of East Pacific. |
| (9) Blue Whale of South Pacific. | (10) Humpback Whale in North Atlantic. |
| (11) Spanish Lynx. | (12) Monk Seal in Mediterranean. |
| (13) Polar Bear. | (14) Siberian Tiger. |
| (15) Northern white Rhinoceros and black Rhinoceros in Africa. | (16) African Elephant. |
| (17) Cheeta in East Africa. | (18) Gorilla in Central Africa. |
| (19) Arabian Gazelle. | (20) Snow Leopard of Himalayas. |
| (21) Indian Python. | (22) Asian Elephant. |
| (23) Giant Panda of China. | (24) Bactrian Camel of Central Asia. |
| (25) Singapore Bat. | (26) Orangutan of Indonesia. |
| (27) Gray Whale of North Pacific. | (28) Bird of Paradise of New Guinea. |
| (29) Australian Gray Kangaroo. | (30) Short-Tailed Albatross in West Pacific. |

(11) POINT MAPS:**(A) EARTHQUAKE PRONE AREAS:**

Source: Adapted from Oxford University Atlas.

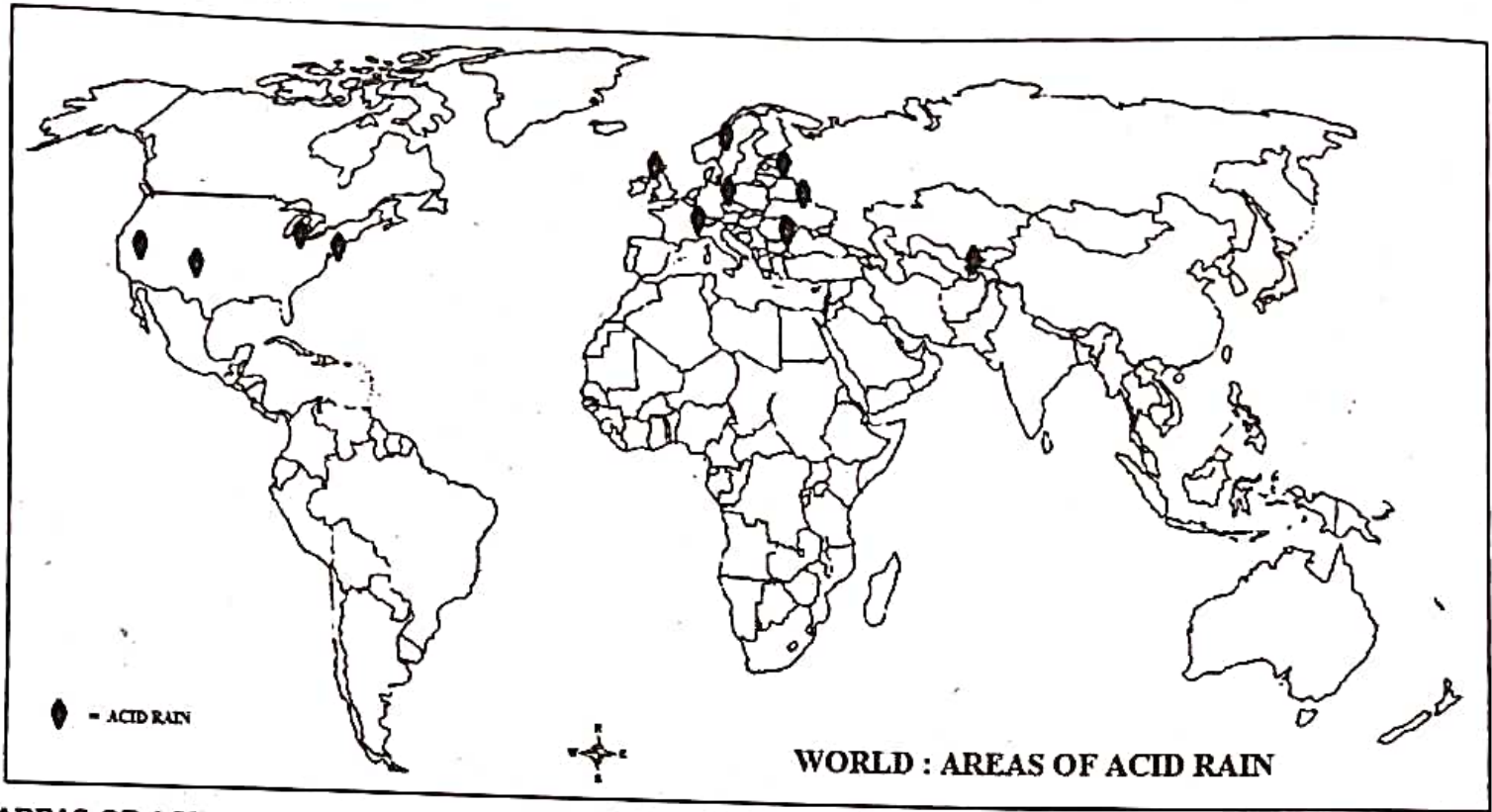
EARTHQUAKE PRONE AREAS:

- (1) **Asia:** Japan, East China Sea, North West Pacific, Coast of Pacific islands, Coast of Malaysia, Indonesia, Western and Central China, Western Coast of India, Iran etc.
- (2) **Europe:** Ukraine, Croatia, Italy and France.
- (3) **Pacific Coast of North and South America.**
- (4) **New Zealand.**

Fill in the blanks:

- (1) An earthquake prone island country in Far-East Asia Japan.
- (2) An earthquake prone country in Europe west France.
- (3) An earthquake prone area in South America west coast area America.
- (4) An earthquake prone country in Central Asia Iran.
- (5) An earthquake prone country in North America Mexico.

(B) ACID RAIN:



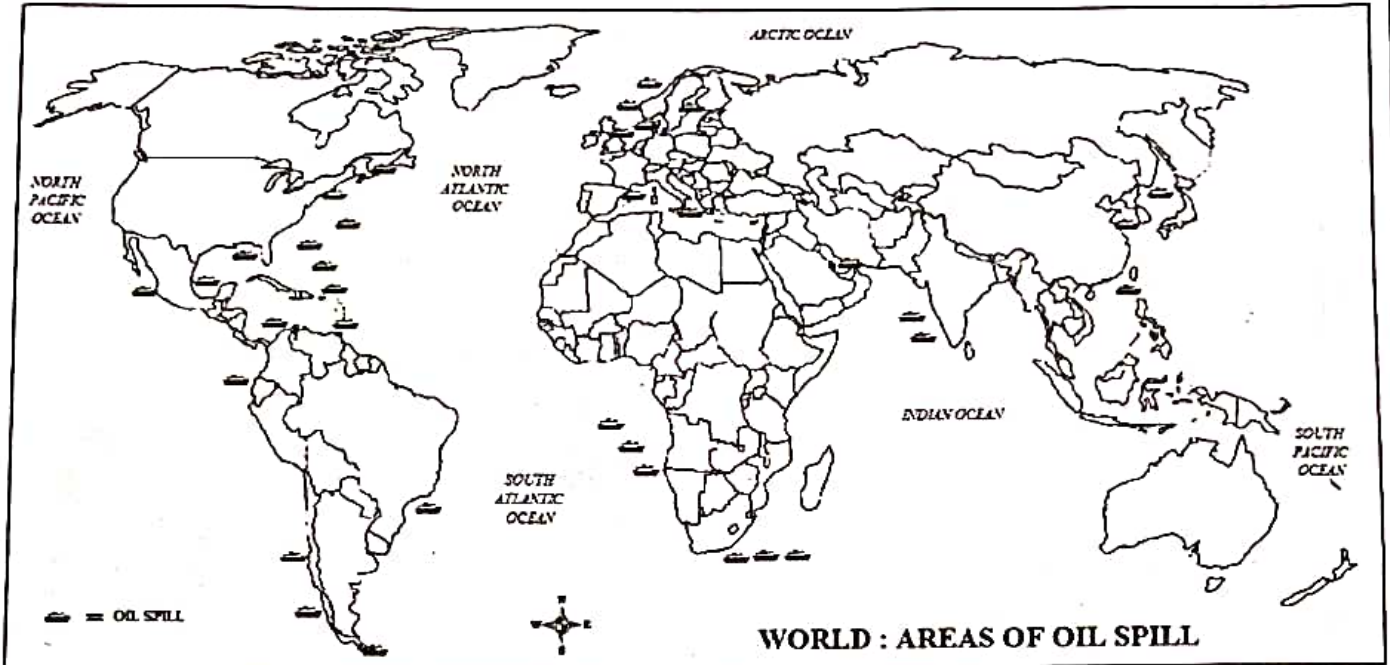
AREAS OF ACID RAIN:

- (1) North America: USA.
- (2) Europe and CIS: UK, Germany, Scandinavian Countries, etc.

Fill in the blanks:

- (1) A North European country experiencing acid rain _____.
- (2) A North American country experiencing acid rain _____.
- (3) A Scandinavian country experiencing acid rain _____.
- (4) The continent which has maximum acid rain _____.
- (5) An Asian country experiencing acid rain Kazakhstan.

(C) OIL SPILLS:

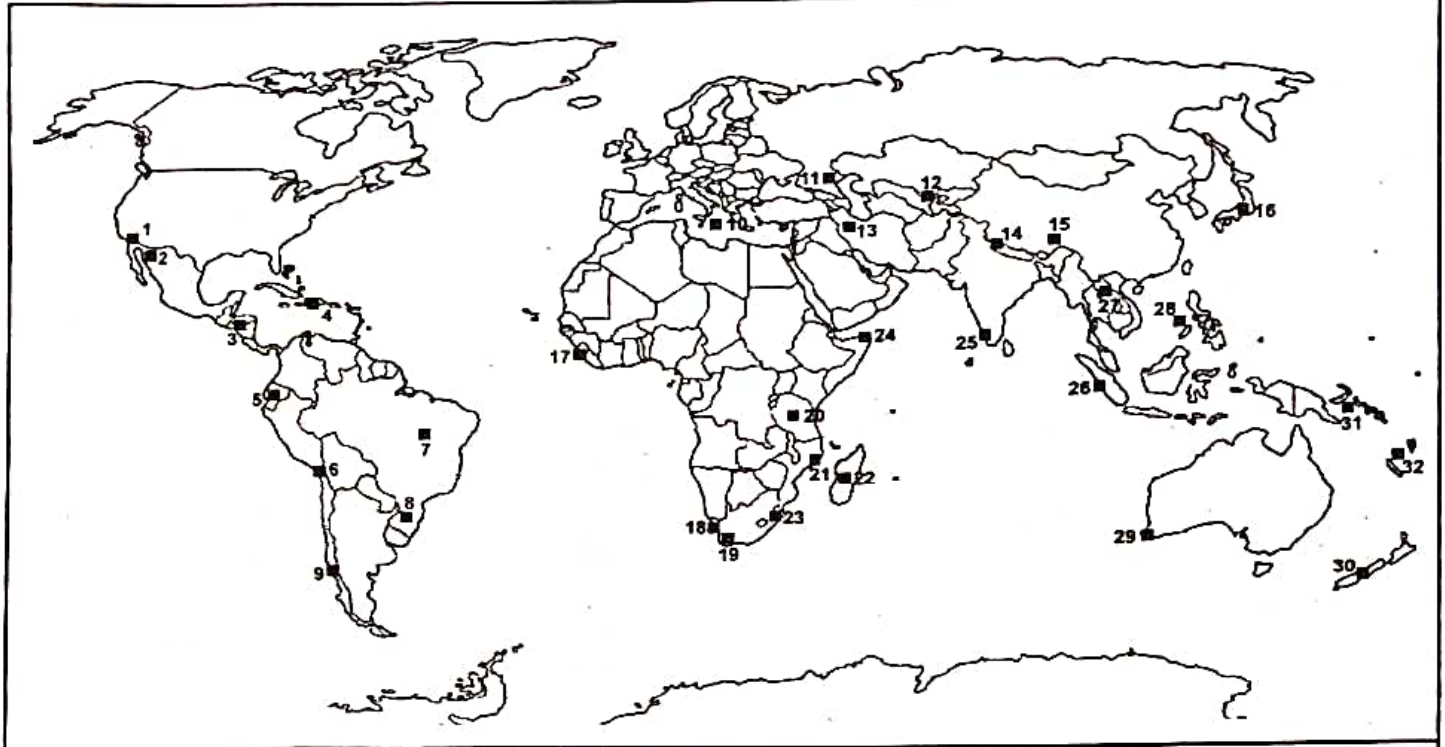


AREAS OF OIL SPILL:

- | | | |
|--|-------------------------------------|-----------------------|
| (a) North Atlantic Ocean | (b) Norwegian Sea and North Sea | (c) Mediterranean Sea |
| (d) Coastal Sea of West and South Africa | (e) Pacific Coast of South America. | (f) Gulf of Mexico |
| (g) Persian Gulf. | (h) Arabian Sea coast of India. | (i) Coastal Japan |
| (j) Korea and China. | | |

Fill in the blanks:

- (1) A major ocean in the Northern Hemisphere having problems of oil spill North Atlantic Ocean.
- (2) A gulf in the West Asia having problems of oil spill Persian Gulf.
- (3) A sea in the Northern Hemisphere having problems of oil spill Arabian Sea and Mediterranean Sea.
- (4) A sea near Indian Subcontinent having problems of oil spill Arabian Sea.
- (5) Southern tip South America having problem of oil spill Chile Pacific coast of South America

(D) BIODIVERSITY HOTSPOTS:**Biodiversity Hotspots**

Source: Adapted from <http://www.biodiversityhotspots.org>

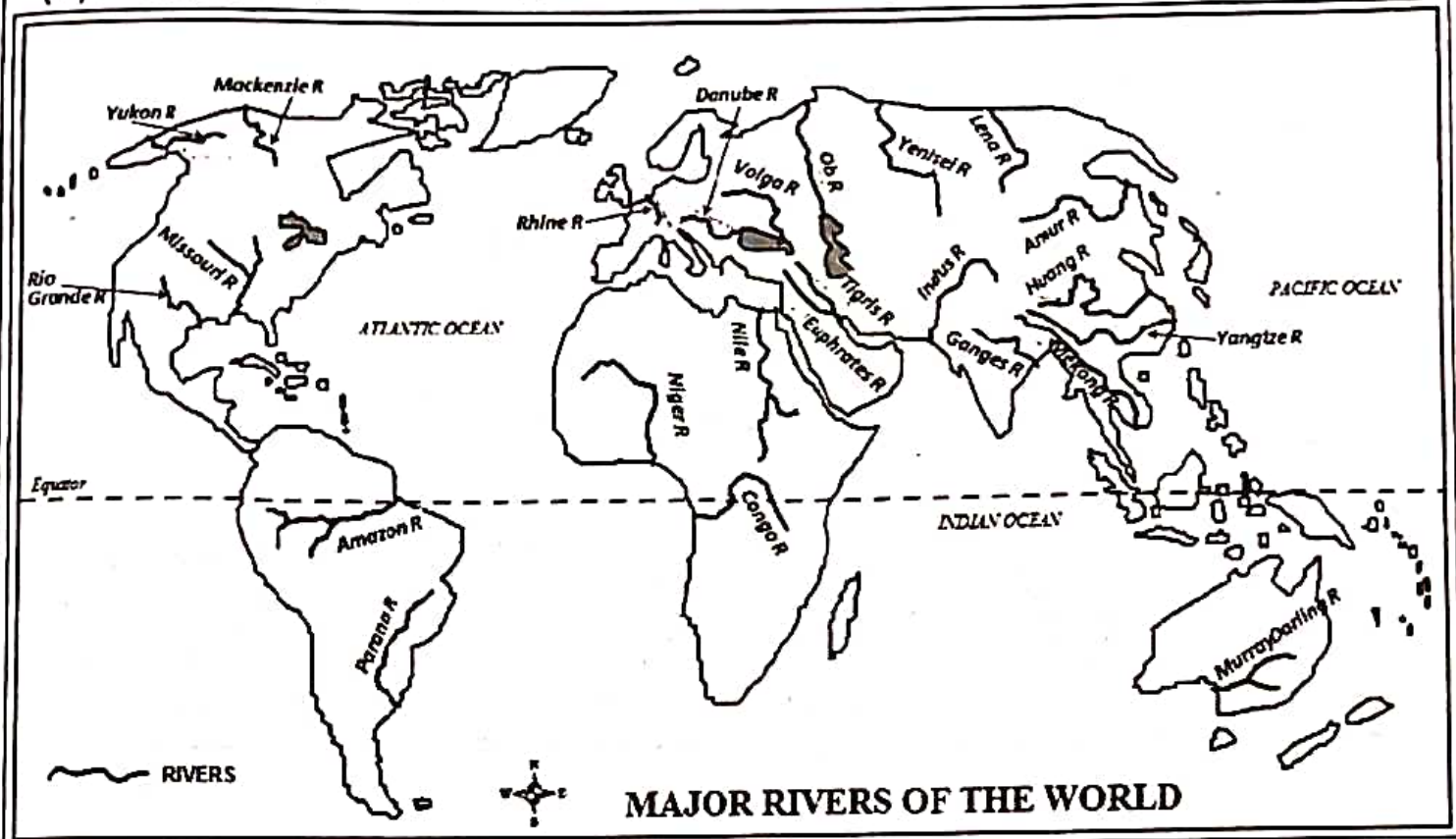
- | | |
|--|---|
| (1) California Florist Province – highest level of plant endemism. | (2) Madrean Pine – Oak woodlands (Mexico Western Coast) |
| (3) Mesoamerica | (4) Caribbean Islands |
| (5) Tumbes – Choco – Magdalena | (6) Tropical Andes |
| (7) Cerrado | (8) Atlantic Forest |
| (9) Chilean Winter Rainfall – Valdivian Forests | (10) Mediterranean Basin |
| (11) Caucasus | (12) Mountain of Central Asia |
| (13) Irano – Anatolian | (14) Himalayas |
| (15) Mountains of south-west China | (16) Japan |
| (17) Guinean Forests of West Africa | (18) Karoo (South Africa) |
| (19) Cape Floristic Region | (20) Eastern Afromontane |
| (21) Coastal Florists of Eastern Africa | (22) Madagascar & Indian Ocean Islands |
| (23) Maputaland – Pondoland – Albany (South Africa) | (24) Horn of Africa |
| (25) Western Ghat | (26) Sundaland |
| (27) Indo-Burma | (28) Philippine |
| (29) South-west Australia | (30) New Zealand |
| (31) East Melanesian Islands | |

Fill in the blanks:

- (1) An island in Africa rich in biodiversity _____.
- (2) A Caribbean island with high biodiversity _____.
- (3) An area rich in biodiversity in India _____.
- (4) A Pacific island with biodiversity hotspot _____.
- (5) A country having biodiversity hotspot in South America _____.

(12) LINE MAPS:

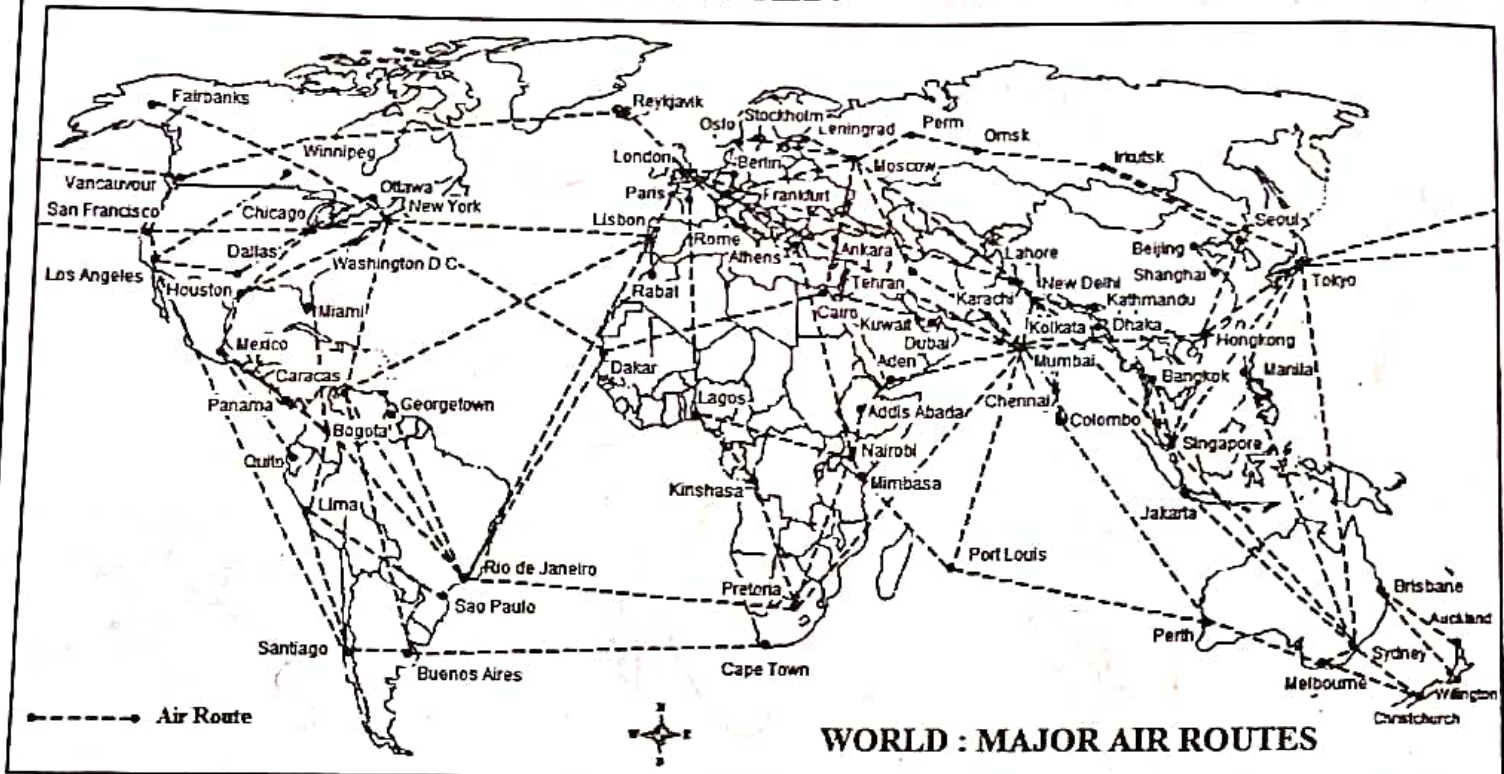
(A) RIVERS OF THE WORLD:



Fill in the blanks:

- (1) The longest river of the world _____.
- (2) Any one major river of China _____.
- (3) One major river of South America _____.
- (4) Any one major river of North America _____.
- (5) Locate the major river of India _____.

(B) MAJOR AIR ROUTES OF THE WORLD:

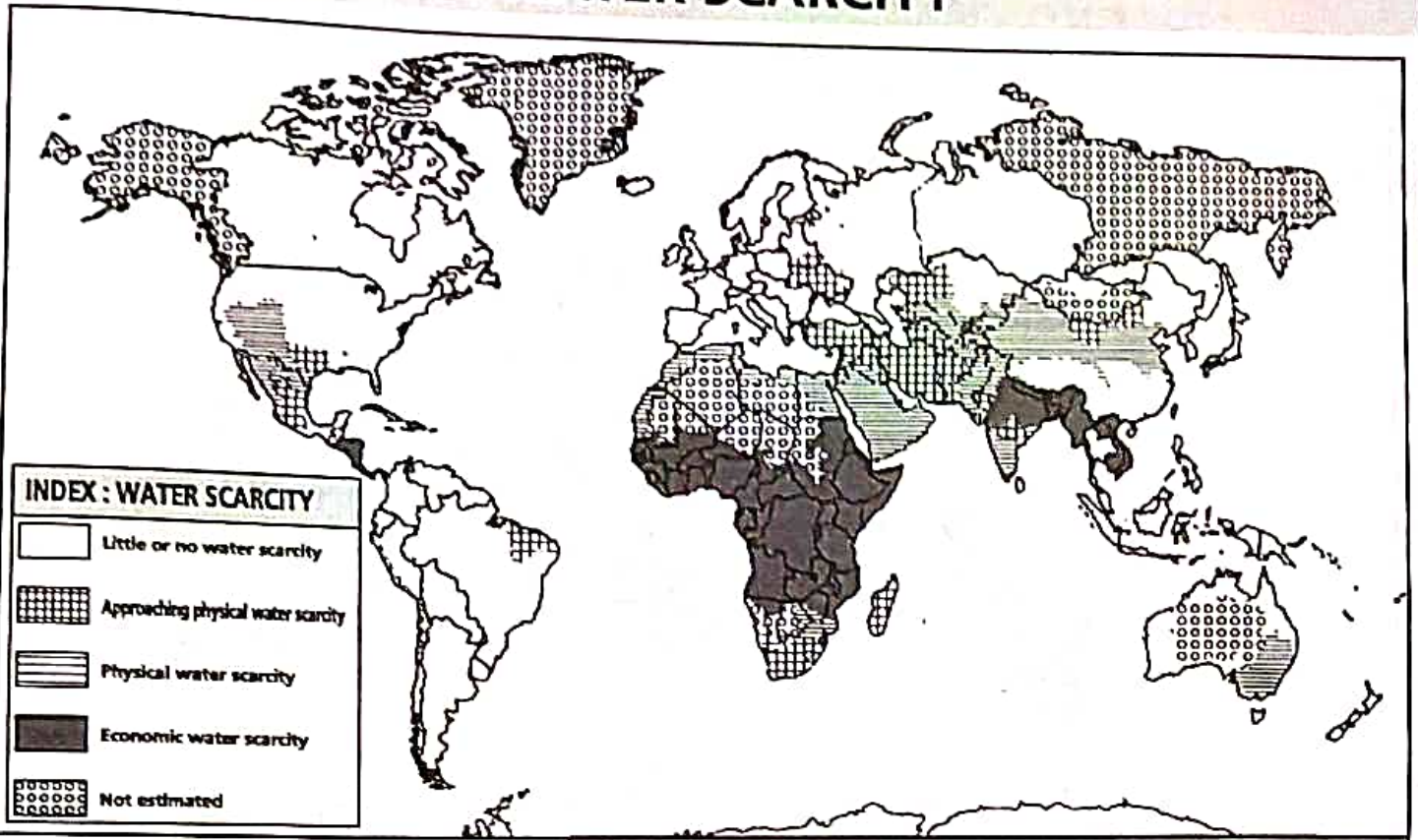


Fill in the blanks:

- (1) Air route connecting Mumbai to London.
- (2) Air route connecting New Delhi to Moscow.
- (3) Air route connecting Mumbai to Dubai.
- (4) Air route connecting Kolkata to Sydney.
- (5) Air route connecting New York to Lisbon.

(13) POLYGON/AREA MAPS:
 (A) WATER SCARCITY:

WATER SCARCITY



DEFINITIONS AND INDICATORS:

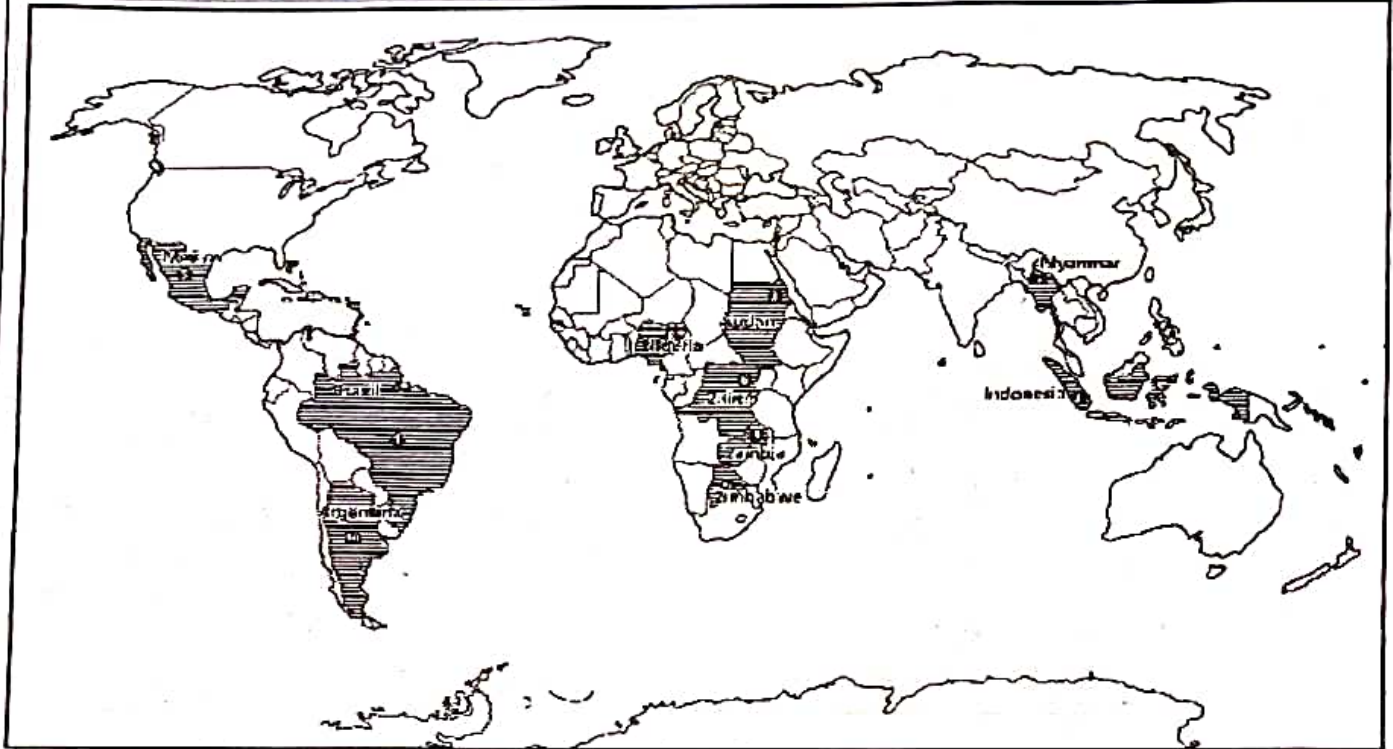
- ◆ Little or no water scarcity. Abundant water resources relative to use, with less than 25% of water from rivers withdrawn for human purposes.
- ◆ Physical water scarcity. Water resources development is approaching or has exceeded sustainable limits. More than 75% of river flows are withdrawn for agriculture, industry, and domestic purposes.
- ◆ Approaching physical water scarcity. More than 60% of river flows are withdrawn. These basins will experience physical water scarcity in the near future.
- ◆ Economic water scarcity (human, institutional, and financial capital limit access to water even though water in nature is available locally to meet human demands). Water resources are abundant relative to water use, with less than 25% of water from rivers withdrawn for human purposes, but malnutrition exists.

Source: International Water Management Institute analysis done for the Comprehensive Assessment of Water Management in Agriculture using the Watersim model.

Map adapted from <http://maps.grida.no/go/graphic/areas-f-physical-and-economic-water-scarcity>

Fill in the blanks:

- (1) An area in North America having physical water scarcity _____.
- (2) A West European country with little or no water scarcity _____.
- (3) A Central African country having economic water scarcity _____.
- (4) A West Asian country approaching physical water scarcity _____.
- (5) Parts of India with economic water scarcity _____.

(B) DEFORESTATION:**TOP TEN COUNTRIES WITH HIGHEST DEFORESTATION RATE****Continentwise Distribution:**

| | |
|-----------------------|---|
| North America: | Mexico |
| South America: | Brazil, Argentina |
| Africa: | Nigeria, Sudan, Zaire, Zambia, Zimbabwe |
| Asia: | Indonesia, Myanmar |

Fill in the blanks:

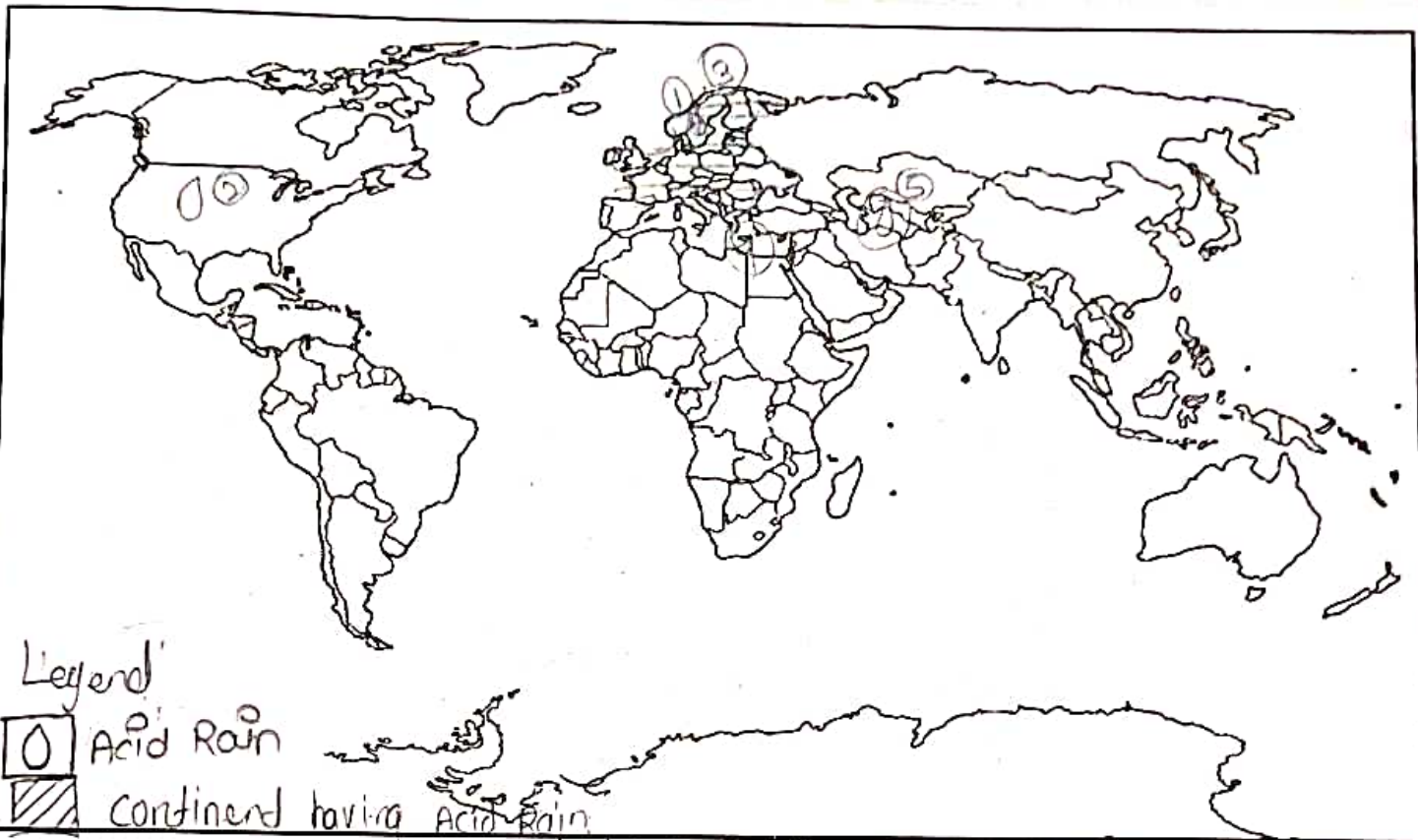
- (1) A country with highest deforestation rate in South America Brazil.
- (2) An island country with high deforestation rate _____.
- (3) A country with very high deforestation rate in Africa _____.
- (4) An Asian country with very high deforestation rate _____.
- (5) A North American country with very high deforestation rate _____.

(14) EXERCISES:

MAP 1:

ACID RAIN

World Map



WORLD: AREAS OF ACID RAIN

In the given outline map of the world locate and name the following:

- (1) An area in India having physical water scarcity.
- (2) A country in North America approaching physical water scarcity.
- (3) An Asian country with highest deforestation rate.
- (4) An African country with high deforestation rate.
- (5) An earthquake prone area in South-east Asia.
- (6) An earthquake prone area in India.
- (7) Areas of oil spill along African coast.
- (8) The continent having highest acid rain.
- (9) An African island with biodiversity hotspot.
- (10) A bio-diversity hotspot in India.

INDIA & ADJACENT COUNTRIES - POLITICAL

