HARI VIDYA BHAWAN

SUBJECT- SOCIAL SCIENCE

CLASS – IX

SESSION – 2020 – 21

WORK SHEET -5

Date – 06-04-2020

GEOGRAPHY CH-1 (INDIA- SIZE AND LOCATION)

NOTES (Do in your notebook)

TOPICS:-

1. **LOCATION OF INDIA**
2. **SIZE OF INDIA**
3. **INDIA AND THE WORLD**
4. **INDIA'S NEIGHBOURS**

LOCATION OF INDIA

- India lies entirely in the Northern Hemisphere.
- Main land extends between latitude 8∘4'N and 37∘6'N and longitudes 68∘7' E and 97∘25'E.
- The tropic of cancer (23∘30∘N) divides the country almost into two equal parts.
- The Andaman and Nicobar Islands and the Lakshadweep islands lie in Bay of Bengal and Arabian sea respectively.

SIZE OF INDIA

- Covering an area of 3.28 million square kilometers.
- India's total area is 2.4% of the total geographical area of the world.
- India is the world's seventh largest country.
- land boundary of India bout15,200 km,
- Total length of the coastline being 7,516.6km.

<u>VERY SHORT QUESTIONS</u> (Do in your notebook)

Q1. Which parallel of latitude divides India into almost two equal parts?
   a) Equator
   b) Tropic of cancer
   c) Tropic of Capricorn

Ans. Tropic of cancer.

Q2. How much of the total geographical area of world does India account for?

Ans. 2.4%

Q3. India is entirely lying in the …………………. hemisphere.

Ans. Northern.

<u>Short Questions</u> (Do in your notebook) Search from Internet

Q1. Write about the size of India.

<u>ACTIVITY: -</u> 1. Which countries are bigger than India in size.

   2. How many states and union territories does

   India have? Write the names also.

(Search from Internet and do in your notebook)

<u>Click over the links to get knowledge about topics of this chapter</u>

https://youtu.be/N4LHJz0TMPw

https://youtu.be/_w4BwzQPqjA

HARI VIDYA BHAWAN

Date – 06/04/2020

WORK SHEET-05
SUBJECT – MATHEMATICS
CLASS – IX
CHAPTER – 01. NUMBER SYSTEM
SESSION - (2020-21)

1. Find the remainder when $x^3 - ax^2 + 6x - a$ is divided by $x - a$.
2. Examine whether $x + 2$ is a factor of $x^3 + 3x^2 + 5x + 6$ and of $2x + 4$.
3. Determine which of the following polynomials has $(x + 1)$ a factor:
   - (i) $X^3 + x^2 + x + 1$
   - (ii) $X^4 + x^3 + x^2 + x + 1$
4. Use the Factor Theorem to determine whether g(x) is a factor of p(x) in each of the following cases:
   - (i) $p(x) = 2x^3 + x^2 - 2x - 1, g(x) = x + 1$
   - (ii) $p(x) = x^3 + 3x^2 + 3x + 1, g(x) = x + 2$
5. Find the value of k, if $x - 1$ is a factor of $4x\ 3 + 3x\ 2 - 4x + k$.
6. Find the value of k, if $x - 1$ is a factor of p(x) in each of the following cases:
   - (i) $p(x) = x^2 + x + k$
   - (ii) $p(x) = 2x^2 + kx + \sqrt{2}$
7. Factorize $6x^2 + 17x + 5$ by splitting the middle term, and by using the Factor Theorem.
8. Factorize:
   - (i) $12x^2 - 7x + 1$
   - (ii) $2x^2 + 7x + 3$
9. Factorize: $x^3 - 23x^2 + 142x - 120$.
10. Factorize:
    - (i) $X^3 - 2x^2 - x + 2$
    - (ii) $X^3 - 3x^2 - 9x - 5$
11. write a short paragraph on vedic mathematics. (**activity**)
    WATCH video in given link: https://www.youtube.com/watch?v=grkWGeqW99c&t=430s

NOTE:

- ➢ **For question 1**: Use **remainder theorem:** If p(x) is any polynomial of degree greater than or equal to 1 and p(x) is divided by the linear polynomial $x - a$, then the remainder is p(a).
  WATCH video on given link: https://www.youtube.com/watch?v=F6onUHbWCus
- ➢ **For question 2**: please refer **NCERT TEXTBOOK** example 11 (page no. 40).
- ➢ **For question 3&4:** Use **factor theorem**: $x - a$ is a factor of the polynomial p(x), if p(a) = 0. Also, if $x - a$ is a factor of p(x), then p(a) = 0.
  WATCH video on given link: https://www.youtube.com/watch?v=4YXE7HDyInM
- ➢ **For question 5&6:** please refer **NCERT TEXTBOOK** example 12 (page no. 41).
- ➢ **For question 7&8:** please refer **NCERT TEXTBOOK** example 13 & 14 (page no. 41&42).
  WATCH video on given link: https://www.youtube.com/watch?v=p6E3iItlVcU
- ➢ **For question 9&10:** please refer **NCERT TEXTBOOK** example 15 (page no. 43).
  WATCH video on given link: https://www.youtube.com/watch?v=6PmGZ32DO94

HARI VIDYA BHAWAN

SUBJECT- SOCIAL SCIENCE

CLASS – X

SESSION – 2020 – 21

WORK SHEET -6

Date- 06-04-2020

GEO (CH-1) RESOURCES AND DEVELOPMENT

Notes (Do in your notebook)

Soil as a Resource

- Soil is the most important renewable natural resource. It is the medium of plant growth and supports different types of living organisms on the earth.
- It takes millions of years to form soil upto a few cms in depth. Various forces of nature such as change in temperature, actions of running water, wind and glaciers, activities of decomposers etc contribute to the formation of soil.
- Parent rock or bedrock, climate, vegetation and other forms of life and time are important factors in the formation of soil.
- Soil also consists of organic (humus) and inorganic materials.

Classification of Soils

On the basis of the factors responsible for soil formation, colour, thickness, texture, age, chemical and physical properties, the soils of India are classified in different types as mentioned below.

Alluvial Soils

- The entire northern plains are made of alluvial soil.
- The Alluvial Soil is deposited by 3 important Himalayan river systems – the Indus, the Ganga and the Brahmaputra.
- It is also found in Rajasthan, Gujarat and eastern coastal plains particularly in the deltas of the Mahanadi, the Godavari, the Krishna and the Kaveri rivers.
- The alluvial soil consists of various proportions of sand, silt and clay. As we move inlands towards the river valleys, soil particles appear to be bigger in size whereas in the upper side of the river valley, the soils are coarse.
- Based on age, Alluvial soils can be classified as:

Old Alluvial (Bangar): The Bangar soil has a higher concentration of kanker nodules than the Khadar.

New Alluvial (Khadar): It has more fine particles and is more fertile than the Bangar.

Alluvial soils are very fertile. These soils contain an adequate proportion of potash, phosphoric acid and lime, which are ideal for the growth of sugarcane, paddy, wheat and other cereal and pulse crops.

Black Soil

- This soil is black in colour and is also known as regur soil. Climatic conditions along with the parent rock material are the important factors for the formation of black soil.
- The soil is ideal for growing cotton and is also known as black cotton soil.
- The soil covers the plateaus of Maharashtra, Saurashtra, Malwa, Madhya Pradesh and Chhattisgarh and extends in the south-east direction along the Godavari and the Krishna valleys.
- The black soils are made up of extremely fine i.e. clayey material and well-known for their capacity to hold moisture.
- Black soil is nutrients rich and contains calcium carbonate, magnesium, potash and lime.
- The soil is sticky when wet and difficult to work on unless tilled immediately after the first shower or during the pre-monsoon period.

Red and Yellow Soils

- This type of soil develops on crystalline igneous rocks in areas of low rainfall in the eastern and southern parts of the Deccan plateau.
- These soils develop a reddish colour due to diffusion of iron in crystalline and metamorphic rocks. It looks yellow when it occurs in a hydrated form.
- Found in parts of Odisha, Chhattisgarh, southern parts of the middle Ganga plain and along the piedmont zone of the Western Ghats.

Laterite Soil

- The laterite soil develops under tropical and subtropical climate with the alternate wet and dry season.
- This type of soil is found mostly in Southern states, Western Ghats region of Maharashtra, Odisha, some parts of West Bengal and North-east regions.
- This soil is very useful for growing tea and coffee.

Arid Soils

- Arid soils range from red to brown in colour.
- This soil is generally sandy in texture and saline in nature. In some areas, the salt content is very high and common salt is obtained by evaporating the water.
- Arid soil lacks humus and moisture.

Forest Soils

- These soils are found in the hilly and mountainous areas.
- The soil texture is loamy and silty in valley sides and coarse grained in the upper slopes.
- In the snow covered areas of Himalayas, these soils experience denudation and are acidic with low humus content. The soil is fertile on the river terraces and alluvial fans.

The map below shows the different types of soils found in India.
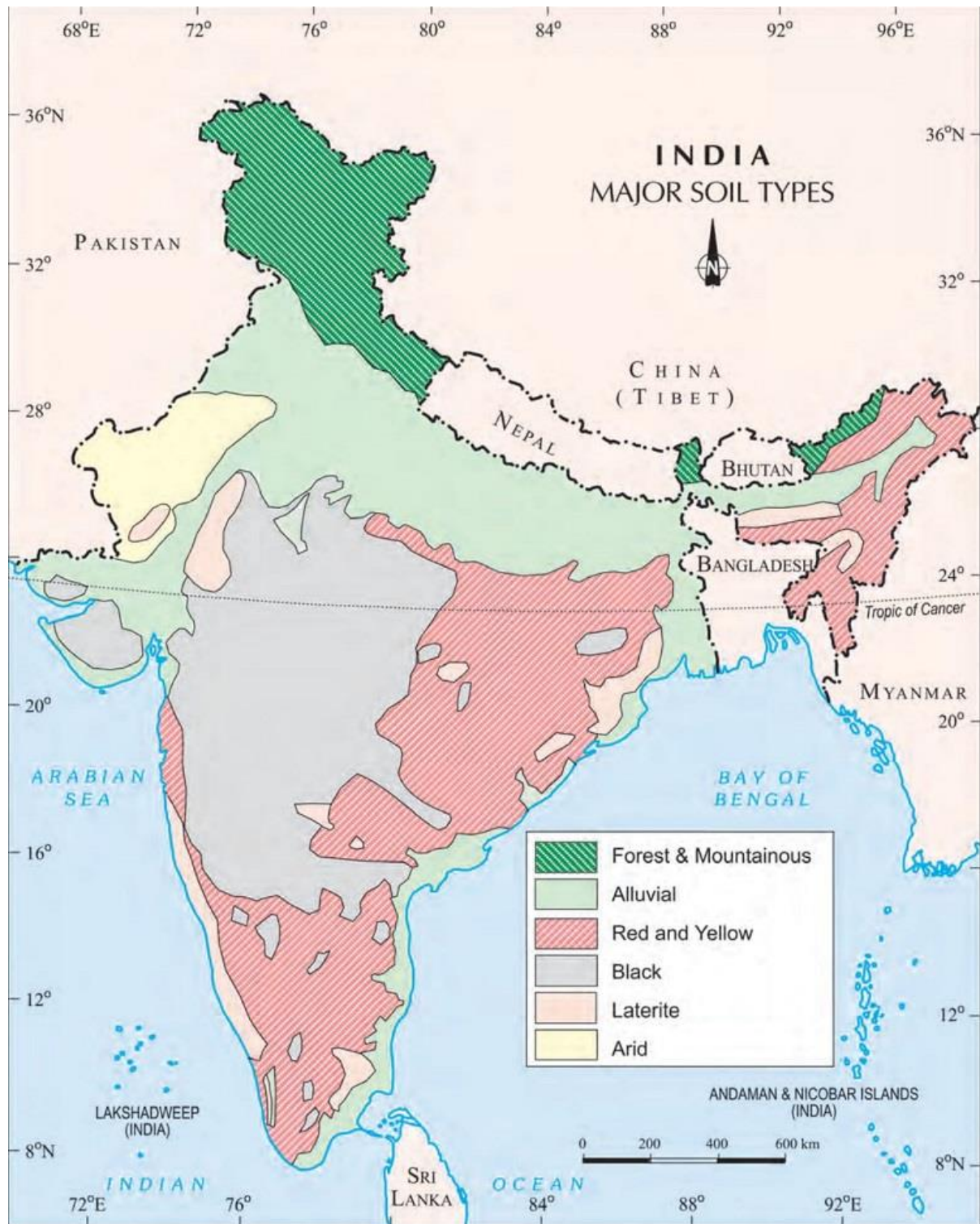
India: Major Soil Types

Soil Erosion and Soil Conservation

- **Th**e denudation of the soil cover and subsequent washing down is described as soil erosion. The soil erosion is caused due to human activities like deforestation, over-grazing, construction and mining etc. Also, there are some natural forces like wind, glacier and water which lead to soil erosion. Soil erosion is also caused due to defective methods of farming.
- The running water cuts through the clayey soils and makes deep channels as gullies. The land becomes unfit for cultivation and is known as bad land. When water flows as a sheet over large areas down a slope and the topsoil is washed away, it is known as sheet erosion. Wind blows loose soil off flat or sloping land known as wind erosion.

Different Ways for Soil Conservation

- Ploughing along the contour lines decelerate the flow of water down the slopes. This is called Contour Ploughing.
- When a large field is divided into strips and strips of grass are left to grow between the crops. Then, this breaks up the force of the wind. This method is known as Strip Cropping.
- Planting lines of trees to create shelter helps in the stabilisation of sand dunes and in stabilising the desert in western India. Rows of such trees are called Shelter Belts.

Short Questions (Do in your notebook) search from Internet

Q1. Define the term Soil erosion. What are the different types of soil erosion?

Q2. Explain the major factors which are responsible for the formation of soil.

Q3. Describe some methods that can be adopted to prevent soil erosion.

Long Questions (Do in your notebook) Search from Internet

Q1. Describe any three important characteristics of each type of soil available in India.

Activity :- paste / Draw political map of India and show all types of soils which is found in India.

- Arid soil
- Forest soil
- Black soil
- Red and Yellow soil
- Alluvial soil
- Laterite soil

Click over the links to get knowledge about all topics of this chapter

https://youtu.be/fR1Q_cnd3Co part -1

https://youtu.be/HQgjVOCOrek part - 2

https://youtu.be/hVUKFVnEiNs part -3

https://youtu.be/cCyVuvpaksw part- 4

https://youtu.be/xEATjOat5c0 part -5

HARI VIDYA BHAWAN   Date-06/03/2020
WORK SHEET-06
SUBJECT- MATHEMATICS
CLASS- X
SESSION - (2020-21)
CHAPTER-2 (POLYNOMIALS)

1. Find out degree of a polynomials $-2x^3+3x^6-4x+2x^8$
2. Divide x^4+x^3-x+1 by $x+2$ than find out quotient and reminder.
3. Sum and product of zeroes of a polynomial are 4 and 5 than find out the polynomials.
4. Write down statement and example of remainder theorem.
5. Find out zeroes of polynomial $x^2+7x+12$
6. Find out zeroes of x^3-1 and verify relation between zeroes and co-efficent.
7. Write down statement and example of factor theorem.
8. Activity: Draw the graph of $x^2+8x+15$ than find out zeroes with the help of graph.
9. Activity: Draw the graph of x^3+1 than find out zeroes with the help of graph.
10. Activity: To find zeroes of a quadratic polynomials graphically.
11. Verify the ½ , 1, -2 are zeroes of cubic polynomial $2x^3+x^2-5x+2$.
12. On dividing x^3-3x^2+x+2 by a polynomial g(x), the quotient and remainder were $x-2$ and $-2x+4$, respectively. Find g(x).
13. Divide the polynomial p(x) by the polynomial g(x) and find the quotient and

    remainder

    $p(x) = x^3 - 3x^2 + 5x - 3,$ $g(x) = x^2 - 2$

    $p(x) = x^4 - 3x^2 + 4x + 5,$ $g(x) = x^2 + 1 - x$

Note :-

https://www.ck12.org/book/cbse-maths-book-class-10/section/2.6 (for activity)

for quadratic polynomials:-

 sum of zeroes($\alpha+\beta$) = -b/a

product of zeroes($\alpha.\beta$) = c/a

for cubic polynomials:-

 $\alpha+\beta+\gamma$ = -b/a

$\alpha\beta+ \beta\gamma+ \alpha\gamma =$ c/a

 $\alpha\beta\gamma$ = -d/a

formula quadratic polynomials:

 $x^2 – (\alpha+\beta)x + \alpha.\beta = 0$

For any query:-

https://youtu.be/uokc5D6oOIk

https://youtu.be/jHYjq0g_nYM

https://youtu.be/o9jCeqR6xqc