

FIELD

VISIT

TO

RAIGAD

Name of the College : ARIHANT College of Education
 Name of the Student : JESSICA PATHAK
 Roll No : 09

Name of the Student : Jessica Pathak

Roll No : 09

DECLARATION

My self Jessica Pathak Roll No. 09 declare that the practical submitted by me is original & written by me. I have done this practical under the guidance of Prof. _____ There is no ambiguity of any kind. In case of any discrepancies occurred in my practical. I will be solely responsible for the consequences. The college will not be, in any kind of responsible for my failure.

Signature of the Student: J. Pathak

Date: 16-05-2023

EVALUATION SCHEME
Rating Scale - Excellent: 5 Good: 4 Satisfactory: 3 Average: 2
Unsatisfactory: 1

Sr. No	Criteria	5	4	3	2	1
1	Introduction (Planning & Organization, Objective)	✓				
2	Justification of choosing the place		✓			
3	Geographical Information about the place (Location, Extension, etc.)					
	3.1. Theoretical Part					
	3.2. Photos		✓			
4	Geographical Implication(Co-relate to other subject)	✓				
4	Significance of field Study (How field Visit enhance the professional Competencies)		✓			
5	List of other Geographical Places	✓				
6	Educational Implication		✓			
7	Strategy for Geography Field Visit for School Students	✓				
8	Reflection		✓			
9	Overall Impression	✓				
	Total Marks out of 50		45			

Name of Guide: Ms. Rachel V. Salas

Sign of Guide with date:  16/5/23.

INTRODUCTION

PLANNING AND ORGANISATION

A field visit was planned and organised by Anant College of Education to Konkan and especially to visit the Raigad fort of our famous king Shivaji Maharaj. This trip required a lot of planning and it needed to be carefully organised.

The count of all the students who were interested to visit was taken firstly. Secondly, the cost and living expenses was decided by a group of students and teachers.

A lot of calls were made for enquiries and finalisation of the trip. The bus was finalised, where we would stay we booked the ropeway, planned which beach we were going to visit, the stops we would take etc. At least more than 15 days went in the planning and organization of this visit.

OBJECTIVE

- To study and visit the coastal plain of western India.
- To explore the Western Ghats of Maharashtra.
- To study the coastline and beaches of Konkan.
- To explore the various trees, flora and fauna of Konkan.
- To visit the famous hill fort of India i.e. Raigad.
- To explore the fort, the geographical structure of the hill fort, the proper use of mountains and hills etc.
- To study the lake surrounding the fort and the various features of the fort and how nature plays a part in it.

JUSTIFICATION FOR CHOOSING THE PLACE

This particular place was chosen for a field visit because it highlights the major physical divisions of India. We get to study the coastal regions, the ~~low~~ plains, the hills, mountains, the Western Ghats and some beautiful beaches.

Konkan is a home to some unique flora and fauna. Everything can be found in abundance here. It makes for a great place for a geographical field visit.

Raigad fort also sheds light on some amazing geographical features. The rope way gives an

astounding view of the mountains and a glimpse of the Sahayadris and lakes.

This place also gives a chance to study the natural resources available in India.

Through the journey, we got to study the different crops, fruits, trees and flowers that are favourable to grow in this area.

GEOGRAPHICAL INFORMATION

Konkan, also called as Aparanta, coastal plain of Western India, lying between the Arabian Sea (west) and the Western Ghats (east). The plain stretches approximately 330 miles (530 km) from the Daman Ganga River north of Mumbai to the Terekhol River between Maharashtra and Goa States and Daman and Diu union territory in the South.

Between 28 and 47 miles (45 and 76 km) in width, the Konkan includes the regions of Thane, Greater Mumbai, Raigarh and Ratnagiri.

The region is traversed by seasonal rivers that drain the heavy monsoonal rainfall from the west of the Sahyadri hills. The generally uneven terrain is

composed of eroded remnant ranges of the Ghats that form low laterite plateaus in the west and terminate in a coastline of alternating bays and headlands.

Only about one-third of the land is cultivable, and the population lives mainly in the relatively fertile river valleys near the coast and in the newly developed industrial belts around Mumbai.

The main crops are rice, pulses (legumes), vegetables, fruits and coconuts; fishing and salt manufacture are also important.

Diveagar is a village located in Shrivardhan Taluka, Raigad district in the Indian State of Maharashtra, approximately 170 kilometers south of Mumbai. The beach contains a number of Shore trees (Casuarina), which are common to coastal Maharashtra. The access to the beach has a dense cover of Shore trees, which are otherwise uncommon in the area.

TREES

COCONUT: We see coconut groves along the coastline. Sandy and saline soil and hot and humid weather is favourable for the coconut tree. Since such a climate is found in this district, dense groves of these trees are found here.

ARECA PALM: The areca palm grows tall like the coconut trees. This tree needs plenty of water. Large plantation of areca palms are found all over the Konkan coast.

MANGO: The 'alphonso' mango of Ratnagiri and Dergad is famous. Mango trees grow in the red soil and saline atmosphere on the mountain side of the lowlands.

CASHEW NUT: Cashew Nut is an important crop of the district.

Cashew nut trees grow in rocky land.

JACKFRUIT : Jackfruit is the speciality of this district. This fruit is thorny from outside but sweet and juicy. The jackfruit season is from March to June.

OTHER FRUITS : Besides those mentioned above, fruits such as bananas, kokum, papaya, amlas, tamarind, jambhule, chikkus, samphale, bore, karwandas, lemon, etc are also grown.

RAIGAD

Raigad is one of the districts in Konkan Division of Maharashtra and Arabian sea coast forms western boundary of the district. Most hilly places of the District are in the Sahyadri mountain range. Previously known as Kolaba, it was rechristened as Raigad district.

Raigad is known for its scintillating historical places, pristine beaches, picturesque landscapes and diverse flora and fauna of Western Ghats.

The fort Raigad was built at a hill top of the Sahyadri Mountains with deep valleys surrounding the three sides of it. It was mainly designed that way so that the capital can be protected from the attack of the enemies.

Raigad fort is situated at a height of 2851 meters above sea level in the Western Ghats. It is located in the

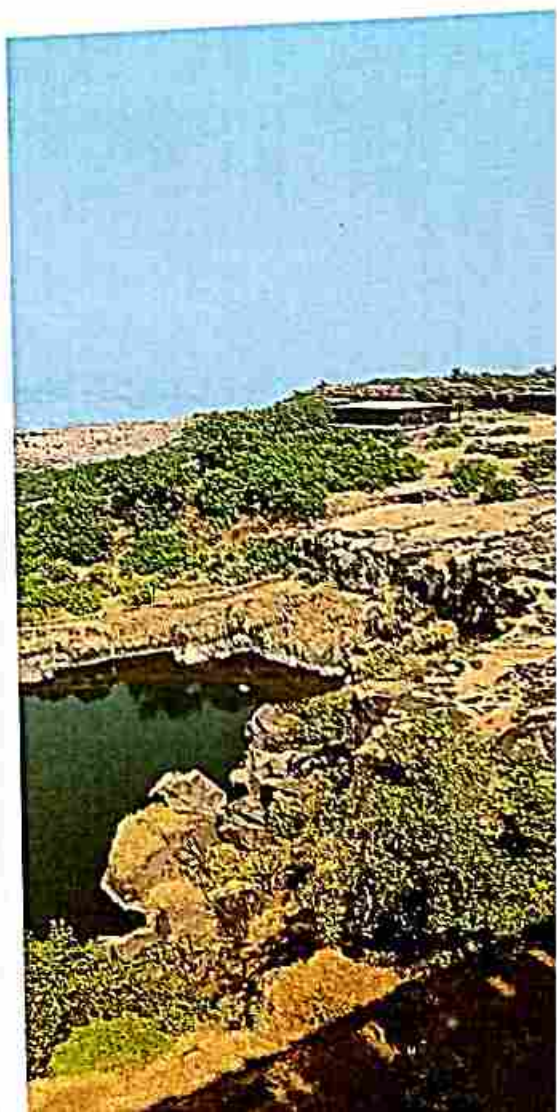
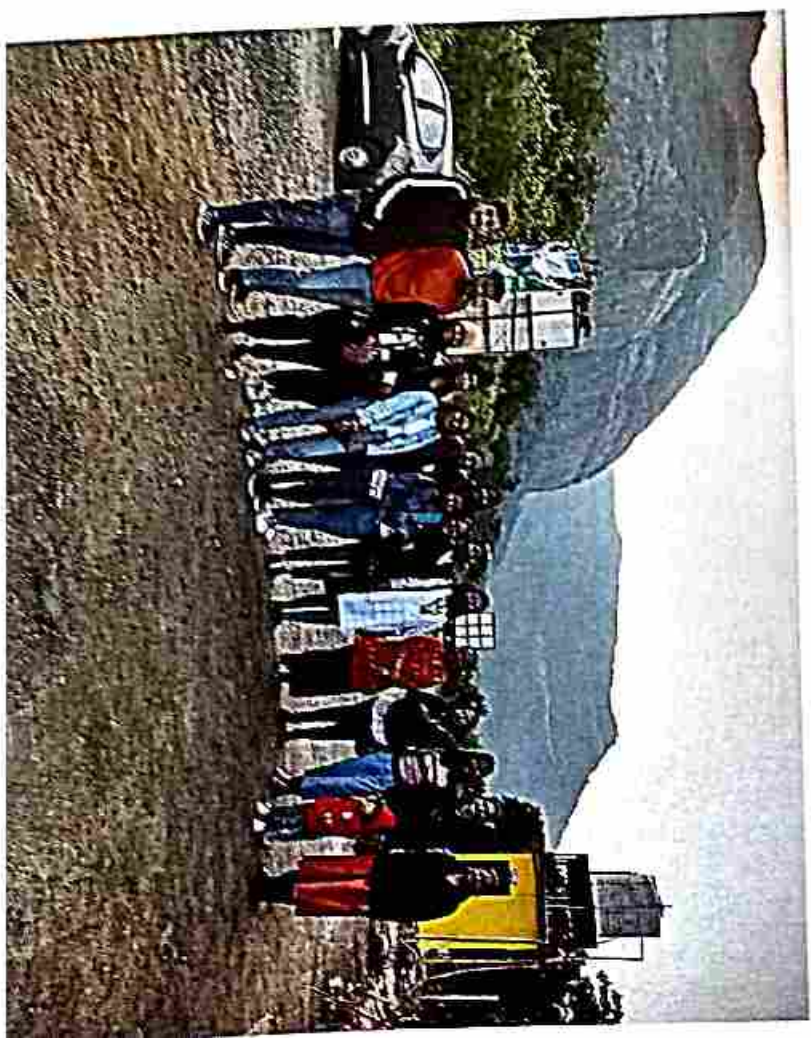
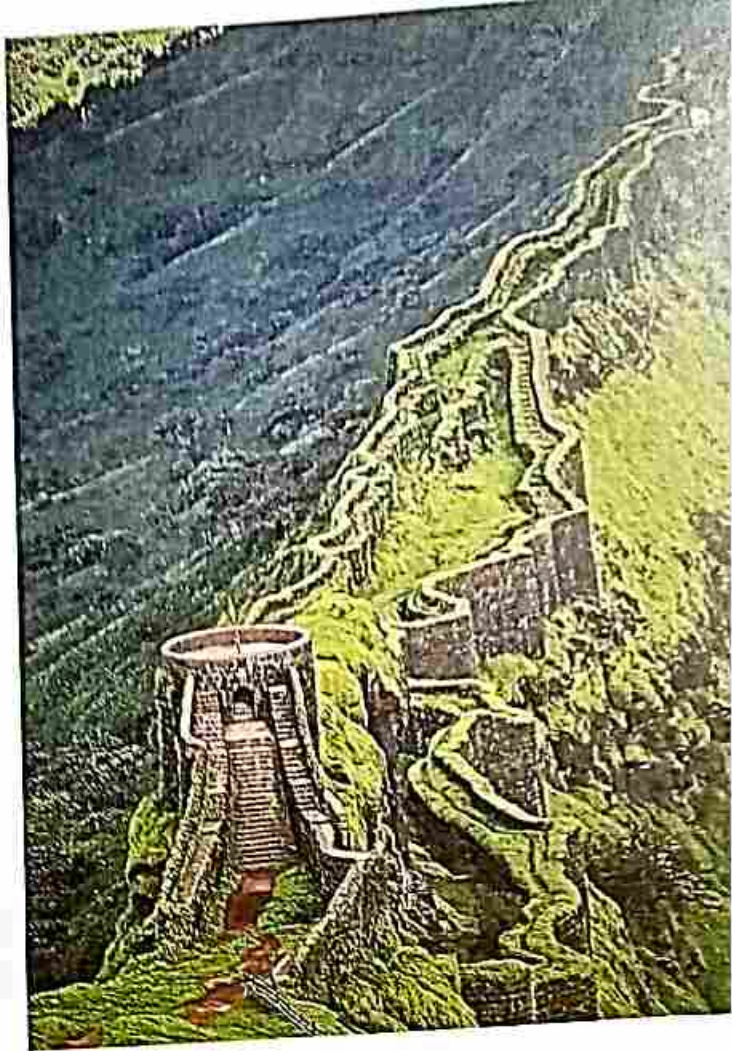
Konkan belt, receiving heavy rainfall. It receives around 2500 - 3500 mm rainfall every year. The summers are hot and humid, with temperatures reaching 40 degrees Celsius during summer. The winters are cool and dry, with temperatures being 28° Celsius on average.

DIVEAGAR BEACH

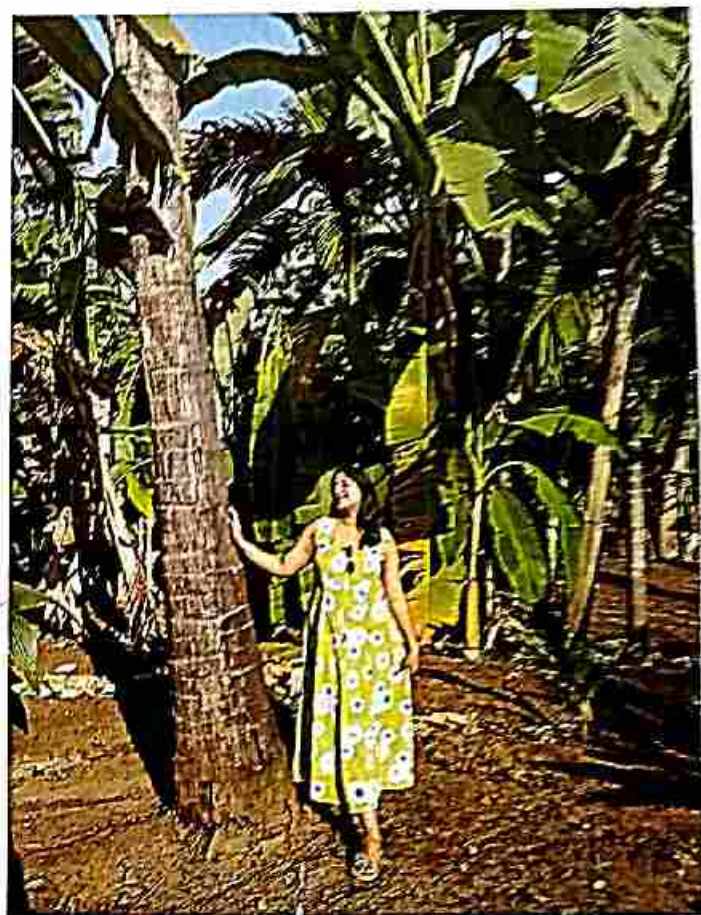
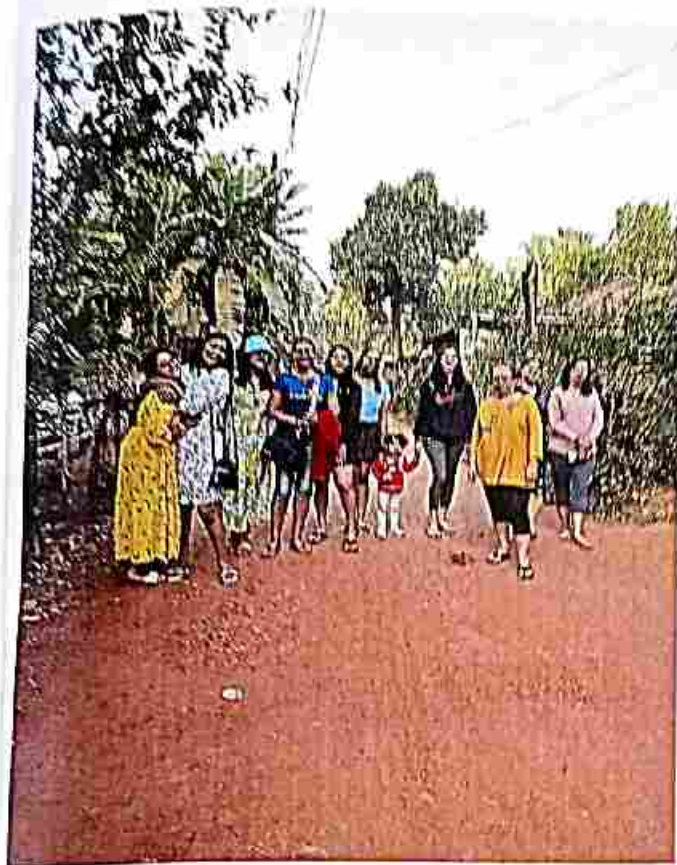
Diveagar Beach is located in the Raigad district of Maharashtra. The beach is peaceful, clean and sparsely populated. The beach, facing the Arabian Sea, is approximately 4 kilometres long and undeveloped.

A beach is a landform alongside a body of water which consists of loose particles. The particles composing a beach are typically made from rock, such as sand, gravel, shingle, pebbles, etc.

Sediments settle in different densities and structures, depending on the local wave action and weather, creating different textures, colours and gradients of layers of materials. These beaches are a source of income for the locals as it provides the tourists some adventurous water sports.







GEOGRAPHICAL IMPLICATION

GEOGRAPHY AND MATHEMATICS.

We always study in quantitative terms, the topics on population, production and distribution of animals, crops, minerals and the volume of trade. Geographical problems may be used for math and algebraic lessons. We use graphs, charts, statistical diagrams as the means for teaching geographical facts.

GEOGRAPHY AND HISTORY

Geography and History are most intimately related. History studies people of different times and geography deals with people of different places. Geography offers explanation for the historical actions of mankind. The geographical phenomena have a profound influence on the course of history.

GEOGRAPHY AND ARTS

Even practical are correlated to geography. In a manual class pupils may prepare cupboards and other articles for storage and exhibition and also models of the means of transport. In a book binding class, map making work may be included.

GEOGRAPHY AND SCIENCE

There has been so much correlation between these two subjects that it has necessitated a common teacher for the teaching of these subjects. Lessons on physical geography are better understood by the knowledge of physical sciences.

GEOGRAPHY AND SOCIAL STUDIES

The teaching of Geography is being correlated with history. At the extreme of substituting social studies for history and geography from the survey of it has been found that no place has been given for the study of physical and practical geography.

SIGNIFICANCE OF FIELD STUDY

• REAL - WORLD EXPERIENCE

It allows students to have a real-world experience. A textbook lesson on the domestic animals can be enhanced by a visit to a local farm where the students can clearly see the domestic animals.

• INCREASE IN QUALITY OF EDUCATION

For eg: a biology field visit could take kids on a hunt for bugs for certain types of flowers. In this case, students can learn more. Hence, it improves the quality of education.

• IT ENHANCES THE CURRICULUM

Field visits are rich in educational possibilities as students

learn from actual hands-on experiences, rather than by simply reading or listening.

• GIVE STUDENTS EXPERIENTIAL LEARNING EXPERIENCES

Involvement in a real world experience makes learning more meaningful and memorable. As a result the students will have more concept of the topic as they have learnt through their hands-on experiences.

• CONCRETE SKILLS SUCH AS NOTE TAKING

Students have to develop questions to be asked, write reports or thank you letters after the visit or evaluate their experiences. By doing such activities students will develop various skills such as note taking skills, speaking skills, writing skills. All of the above will be enhanced and will make them professionally competent.

LIST OF OTHER GEOGRAPHICAL PLACES

1. Ajanta and Ellora Caves
2. Mahabaleshwar
3. Paithani
4. Lavasa
5. Kolad
6. Bhandarkar
7. Mumbai
8. Rajmachi
9. Lonavala
10. Alibaug
11. Khandala

12. Tarkarli
13. Kashid
14. Nashik
15. Mathuran
16. Amboli
17. Tadoba National Park
18. Kamshet
19. Dusrhet
20. Bhimashankar
21. Malvan
22. Karjat
23. Igatpuri
24. Suryamal
25. Harihreshwar
26. Ratanwadi
27. Chiplun
28. Murud Janjira

EDUCATIONAL IMPLICATION

Field visits help students to gain practical knowledge of the subject. Such visual and practical experience allows students to remember, learn and understand subjects for their lifetime.

Field trips help strengthen classroom materials and bring classroom lessons to life. Such trips provide students with the opportunity to visualize, experience and discuss information.

Going on such educational tours offers students an extraordinary cultural learning experience. These field trips incite the evolution of moral, personal, social and study skills. They often develop leadership qualities and motivate them to perform better.

STRATEGY FOR GEOGRAPHY FIELD VISIT FOR STUDENT

1] VISIT SELECTION

- a) Identify objectives and plan of evaluation for the field visit.
- b) Select site to be visited and arrange date and time.
- c) Conduct pre-visit to familiarize yourself.

2] LOGISTICS PLANNING

- a) Apply for administrative approval and file requisition for transportation.
- b) Make arrangement for meal and develop schedule for the day.
- c) Arrange special equipments like cameras and collect money if the site demands.
- d) Inform Parents about the visits.
- e) Create a list of student names and home phone numbers for emergency.

3] FIELD VISIT PREPARATION / PRE-VISIT DISCUSSION

- a] Discuss the purpose of the field visit
- b] Show photographs or posters of the site.
- c] Set a standard conduct and discuss money usage, dress code etc.
- d] Discuss how to ask good questions and make a list of open-ended observation questions to gather information.
- e] Overview the field visit schedule.

4] THE FIELD VISIT

- a] Let students to sketch if necessary
- b] Ask prepared questions and note the answers.
- c] Do the things that are planned.

5] POST - FIELD VISIT

- a] Let students share their observations and reactions to field visit experiences.
- b] Create classroom bulletin board displaying materials collected while on field visit.
- c] Let class compose thank-you letters to those who helped during the field visit. Include special information learned.

6] EVALUATING FIELD VISIT

- a) What was the unique educational value in this visit?
- b) Did the students meet the objectives?
- c) Was there adequate time?
- d) Was there adequate staff and adult supervision?
- e) What might be done differently to be better?
- f) What points s to be emphasized next time?
- g) What problems should be addressed in the future?

REFLECTION

My field visit to Raigad district was extremely productive and educational. I got to study and observe many geographical aspects of Raigad fort. How it is surrounded by lush greenery and built perfectly on top of the hill.

The ropeway of the fort helped me study and gaze at the beautiful scenic views of the surrounding areas. The Sahyadri mountains and the western ghats. It was very educational and I got to see a lot of historical sites on the fort too.

The Divargas beach was also a amazing place to visit. The pathway to the beach was filled with soft sand and lush coconut and different trees. There were many different kinds of flowers and fruit trees too. We also got to see small water bodies and lakes on the fort and surrounding the fort.

all in all, it was a very memorable field visit. Both the geographical and historical aspects gave me an opportunity to explore the real world and to build connections between theoretical and practical knowledge.

I hope in the future I get a chance to embark on such marvellous field visits and that I can take my students for such educational trips too.

~~TH~~

CONTENT ANALYSIS

Arbhan Education Foundation's

Name of the College : Arbhan College of Education
 Name of the Student : Jessica Pathak
 Roll No : 09

My self Jessica Pathak Roll No. 09 **DECLARATION**
 I declare that the practical submitted by me is original & written by me. I have done this practical under the guidance of Prof. There is no ambiguity of any kind. In case of any discrepancies occurred in my practical, I will be solely responsible for the consequences. The college will not be in any kind of responsible for my failure.

Signature of the Student: Jessica Pathak
 Date: 16-05-2023

B.Ed.205 -
 Activity: Content Analysis
EVALUATION SCHEME
 Rating Scale - Excellent: 5 Good: 4 Satisfactory: 3 Average: 2
 Unsatisfactory: 1

Sr.No	Criteria	5	4	3	2	1
1	Categorization of Content (Concept/Example/Formula/Diagram/Rule/Maps)	✓				
2	Relevant to Content - Proper language, according to age, Reliable. Updated		✓			
3	Objectives and Specifications	✓				
4	Reflection of Objectives of Syllabus		✓			
5	Learning Experiences					
6	Teaching Method/Pedagogy/Strategy		✓			
7	Core elements, Values, Life skills, Maxims, Principles	✓				
8	Activities & Evaluation tool with respect to Content		✓			
9	Educational Implication	✓				
10	Overall Impression	✓				
	Total Marks out of 50	46				

Name of Guide: Ms. Rakel V. Sahu

Sign of Guide with date: [Signature] 16/5/23

STD - VI

L-9 ENERGY

RESOURCES

Categorization of Content

CONCEPT

The content of Energy Resources was introduced by giving examples of things for which we need our energy. A table of different energy resources was also shown in the textbook.

Energy Resources can be classified in many ways such as conventional - non-conventional, biotic - abiotic, renewable - non-renewable, substance-based - process-based, etc. The term energy resource refers to any material that can be used as a basis or source of energy.

Energy resources are used to generate electricity and other forms of power for human use. Using these energy resources, we can undertake the following kinds of power generation - hydel power, thermal power, atomic power, geo-

thermal power, etc.

EXAMPLE

Different examples were used to describe energy resources. There was also a table used to showcase substance-based energy resources and process-based energy resources.

Examples were mainly shown through pictures with a small description written below it.

A variety of examples were given in paragraph form too.

DIAGRAM

As such no diagrams were used. Only the table of substance-based and process-based energy resources was shown on pg. 52.

FORMULA

Since this lesson is based on resources, no formulas were used throughout the lesson as its need was not shown anywhere.

RULE

No rules were used or applied in this chapter.

MAPS

A political map of India was shown on Pg 55. All the States were marked along with a Index which displayed the major coal and Mineral Oil Fields of India.

A few questions were given below the map so that the students can study the map and answer the six given questions for better understanding of the content.

Relevant to Content

PROPER LANGUAGE

The language used in the chapter is proper, simple with no grammatical errors and marked with proper punctuation.

Each part is explained with appropriate English vocabulary and allows for simple understanding of all students.

ACCORDING TO AGE

The content and language used is according to the age of students. Grade VI students will be able to easily understand and interpret the content and the language used.

RELIABLE

The content is reliable,

it is true and at the end of the chapter websites for reference are also provided where students can cross-check and expand their knowledge.

UPDATED

The content is up-to-date. The current and innovative energy resources are also mentioned in the chapter. A number of examples and activities portray the updated knowledge provided by the chapter.

Objectives and Specifications

- Remembering
- Understanding
- Applying
- Analyzing
- Creating
- Evaluating

The students will be able to

- define terms such as conventional, renewable, biotic, substance-based, process-based, hydel power, tidal energy, geo-thermal energy etc.
- recall examples of natural, human-made, exhaustible, non-

inexhaustible, renewable, non-renewable
and energy resources.

- distinguish between substance-based and process-based energy resources.
- rationalize why we must be careful while using such resources.
- recall the various uses of petrol, wind, natural gas, sunlight, solar energy and other resources.
- appreciate the need to conserve natural resources so that they last longer.
- apply the knowledge learned in this day-to-day life.
- create different projects on the topic given.
- evaluate the need of energy resources and how to conserve and use them properly.

Reflection of Objective of Syllabus

The following are the reflection of objectives of syllabus.

- Throughout the syllabus the students will be encouraged to understand concepts like angular distance, latitudes and longitudes.
- using globe for understanding different concepts.
- using map / technology to find out the location of country / state / district / village / school, etc.
- discussing various elements of nature and climate.
- understand the importance of oceans and discuss the reasons behind marine pollution.
- obtain information regarding the rocks found in the surrounding, rocks used in making historical monuments, houses etc.

- Explain the use of distribution of rock types in Maharashtra with the help of a map.
- Explaining the use of natural resources giving examples.
- Discussing that the judicious use of the resources of natural resources is necessary.
- Give examples of process-based and substance-based energy resources.
- Suggesting measures to conserve energy resources.
- Correlating on the basis of the differences between various occupations.
- Visiting an occupation in the locality.
- Understand the difference between use of maps and globes.

The syllabus will equip students to understand the environment and learn the importance of conserving it. It provides practical knowledge through theory and diagrams.

Learning Experiences

The teacher can effectively teach the lesson by giving students the different learning experiences listed below.

- board and chalks of different colours.
- photographs and images of different energy resources.
- Videos on use and conservation of energy resources.
- Map of India (Political)
- A model of wind mills to show wind energy.
- A solar panel.
- charts, diagrams, flash cards.
- blind learning, using the textbook and technology to give a good effective learning experience.

TEACHING METHOD

- Project Method
- Comparative Method
- Lecture Method
- Discussion Method
- Question - Answer Method
- Field Visit
- Co-operative Learning
- Flipped - Blended Method.

The above methods can be used to teach the content of Energy Resources to Grade VI students.

CORE ELEMENTS

- Constitutional obligations.
- Protection of Environment
- Inculcation of Scientific temper.

VALUES

- Scientific Attitude
- Dignity of Labour

LIFE SKILLS

- Decision Making.
- Creative Thinking
- Problem - solving
- Critical Thinking
- Productive Thinking

MAXIMS

From Known To Unknown

The teacher can discuss the energy resources students are already aware of and then introduce new and unknown energy resources.

From Simple To Complex

Teacher can first start with solar and tidal energy and then venture into thermal and geo-thermal energy.

From Concrete To Abstract

The teacher can show working models of windmills etc. and then teach the concept.

From Particular To General

The teacher should give particular examples of resources and ask students to generalize them.

~~From Whole To Part~~

Teacher should first explain what are energy resources then teach each resource in detail.

PRINCIPLES

1. Active involvement of the learner.
2. Teacher's knowledge about subject matter is essential.
3. Effective feedback
4. Motivation and Inspiration
5. Principle of relevance
6. Effective two-way communication
7. Principle of Correlation.
8. Personalized learning
9. Principle of linking with actual life.
10. Principle of Pupil Centredness.
11. Principle of flexibility

ACTIVITIES

- The teacher will ask the students to solve Pg 51 and conduct a discussion to discuss the answers.
- The students with the help of the map of India solve the questions given on Pg 55.
- Students will conduct a discussion on sources of energy.
- Show power generation centres on an outline map of India.
- Write information on any one energy resource and supplement the information with pictures.
- Make a collage on different sources of us energy.
- Group discussion on importance of conservation of various resources.

EVALUATION TOOLS

- Questionnaire
- Checklists
- Rating scale
- Tests (oral and written)
- Observation
- Worksheets
- Rubrics

EDUCATIONAL IMPLICATION

Content analysis is valuable in planning the teaching because it allows teachers to collect and examine the distinctions of the teaching content.

Content Analysis helps the teacher to analyze the content by a teacher for effective teaching. The teacher analyzes the content to different particles with psychological and factual point of view. The teacher can identify the significant areas, facts, concepts and other relevant particles of the content.

Breaking down of content and scrutinizing it closely helps in better understanding and facilitates effective teaching and learning.

9. Energy Resources

Can you tell?

Observe the pictures and answer the questions.



Figure 9.1 : Studying in the Light of a Lantern

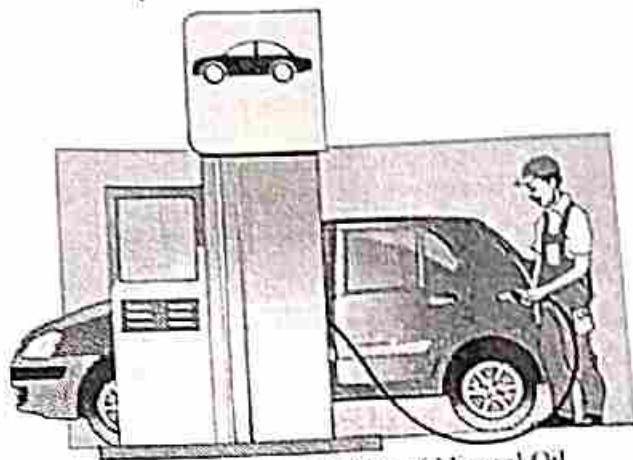


Figure 9.2 : Use of Mineral Oil



Figure 9.3 :
A Pinwheel,
Winnowing

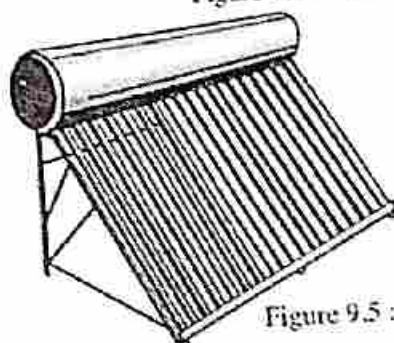


Figure 9.5 : A Solar Energy Panel

- Which energy resource is used in figure 9.1 to obtain light?
- Where did this resource come from?
- Figure 9.2 shows fuel being filled in a motorcar. From where was this energy resource brought to the pump?
- Figure 9.3 shows Malati with her pinwheel and her father winnowing grain. Who is helping both of them?
- Which energy resource is used for lighting a lamp, running a rickshaw and heating oil as shown in figure 9.4?
- What are the various purposes for which man can use sunlight?
- For which of the above energy resources do we have to spend money?

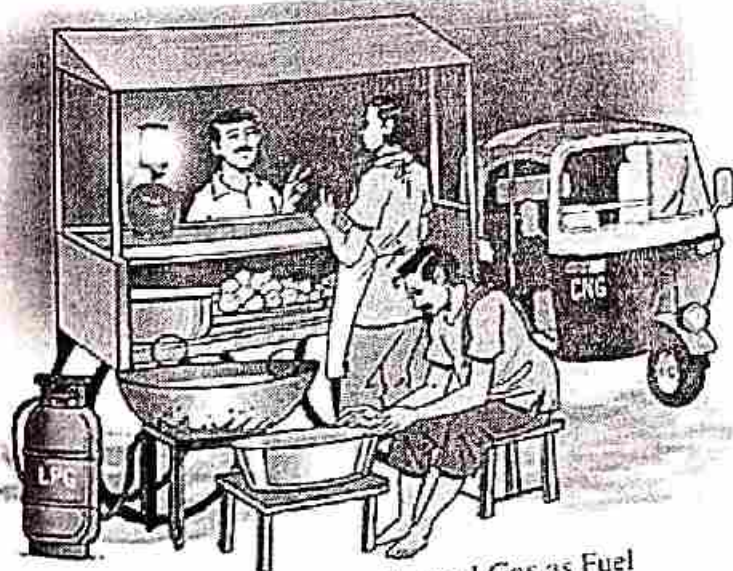


Figure 9.4 : Using Natural Gas as Fuel

Which of these energy resources are available free of cost?

Explanation

We engage in various activities to fulfil needs, for which we need energy. In the past, human labour and animals were used for many tasks. Gradually, man's needs increased and with it, several changes took place in the use of energy resources and prices. Still, man mainly obtains this energy

from nature. You must have realized this while answering the above questions. We use petrol, wind, natural gas, sunlight, etc. besides other resources.

Energy resources can be classified in many ways such as conventional-non-conventional, biotic-abiotic, renewable-non-renewable, substance-based-process-based, etc. Let us consider the last classification. The following table shows the characteristics of the energy resources through their classification.

Substance-based Energy Resources	Process-based Energy Resources
Examples - Wood, coal, mineral oil, natural gas, waste matter, atoms.	Examples - The sun, wind, water, tides, and heat from the earth's interior.
Substances do not last perpetually.	Natural processes are perpetual.
Substances get used up.	Processes are always available.
Reuse is not possible.	Reuse is possible.
Availability is limited.	Availability is unlimited.
Takes thousands of years to replenish them.	These are easily available in nature.
Except for atomic energy, all other resources are biotic.	All processes are natural.
Generation of energy leads to pollution.	Generation of energy is pollution-free.
Except for atomic energy, all other resources are conventional.	All these resources are non-conventional.
Generation of energy is relatively cheap.	Developing the technology for the use of these resources is expensive.
Being inflammable, these resources cause damage to the environment.	In the long run, these energy resources are environment-friendly.
Type of power generation: Thermal and atomic.	Type of power generation: Thermal and kinetic.



Figure 9.6 : Cooking on a Stove



Figure 9.7 : Roasting on a Coal Burner



Figure 9.8 : Cooking on a Kerosene Stove



Figure 9.9 : Removing Baked Items from an Oven



Figure 9.10 : Cooking on a Gas Stove

Using these energy resources, we can undertake the following kinds of power generation – hydel power, thermal power, atomic power, geo-thermal power, etc. In thermal power stations, it is necessary to burn the energy resources directly to generate electricity. Kinetic energy can also be used to generate power or electricity.



Do it yourself !

Figure 9.6 to 9.10 show that various energy resources are used for cooking food. List them. Now classify them using the chart we have studied. Discuss whether we can use alternate energy resources for cooking.

Do you know?

Demand for energy is constantly on the rise due to the growing needs of human beings. Solar energy and wind energy are easily available to us. But the power generated using these resources cannot be stored in sufficient quantities to ensure a continuous power supply. At present, it is very expensive to store this energy. Effects are on to make these resources affordable through research.

Explanation

Substance-based Energy Resources

Wood: In villages, wood is used on a large scale for cooking on earthen stoves.



Figure 9.11 : Cooking on an Earthen Stove

Coal: Long ago, plant and animal remains got buried due to earth movements. They were then decomposed due to pressure and heat, leaving behind the element, carbon. That is how coal was formed.

Coal is used for different purposes according to its quality. Low-quality coal is used for cooking, and coke and high-quality coal is used in industries, as also in thermal power stations.



Figure 9.12 : A Blacksmith at Work

- **Mineral oil and natural gas:** Like coal, these were also produced due to earth movements. Mineral oil is found under land surface and also below the ocean floor.

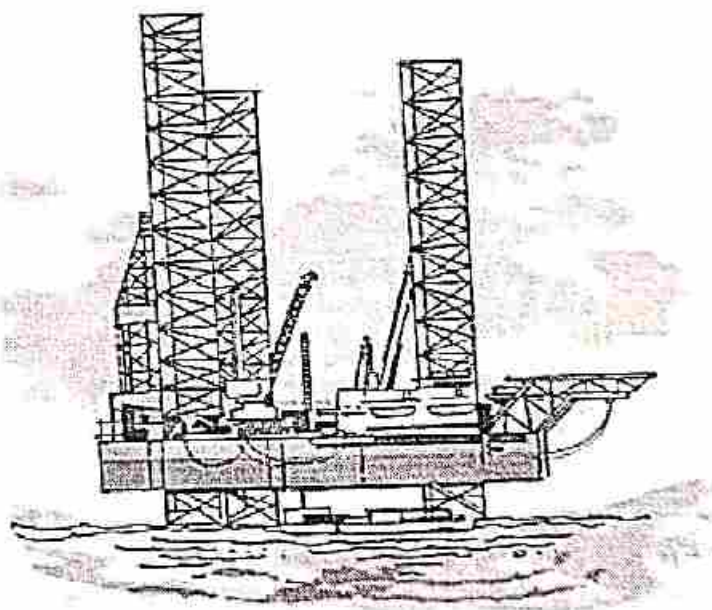


Figure 9.13 : Oil Rig

In most of the mineral oil wells, reserves of natural gas are also found. Mineral oil reserves are limited in nature. However, this oil is in great demand. Hence, its cost is very high. It is called 'black gold' because it has a blackish colour and it is costly. These energy resources are used in thermal power generation. Study the distribution of mineral oil and coal fields in India as shown in figure 9.14.

Use the map to answer the questions given below it.

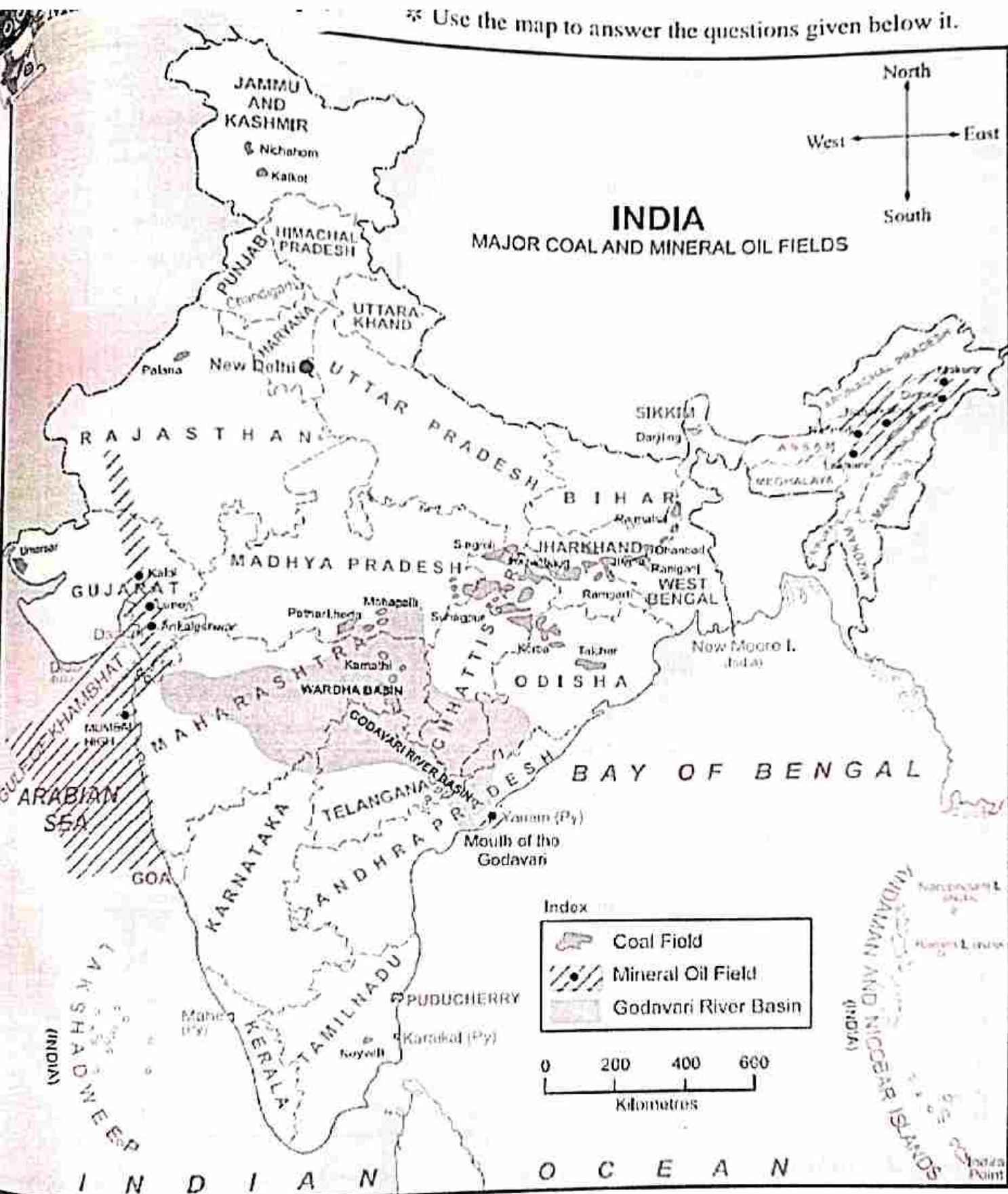


Figure 9.14

Name the States which have coal fields.
Name the mineral oil field in the Arabian Sea.
Name two States which have coal fields on a large scale.
Which mineral oil fields are located in North-east India?

- The reserves of which mineral are found in the Godavari basin?
- Which of the States have mineral reserves in the Godavari basin?

- **Biogas** : Biogas can be generated from biotic waste material such as faeces of animals, and dead leaves, shells etc. This energy can be used for domestic needs such as cooking, heating water, lighting lamps, etc. Some farmers have raised biogas plants in their own yards to cater to their domestic needs.

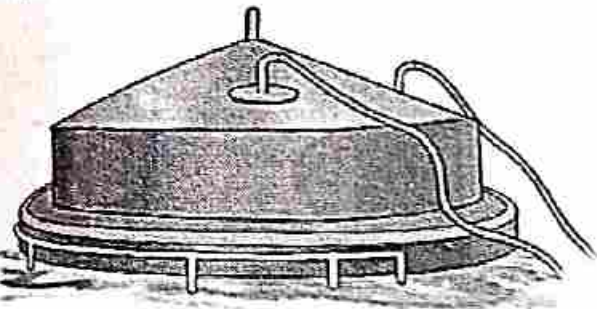


Figure 9.15 : A Biogas Plant

- **Energy from Waste Material**: Waste is generated daily on a very large scale in big, metropolitan cities. Waste disposal is a major problem in such places. This waste can be segregated to use the biotic component to generate gas. This gas can then be used to generate power. In future, this may help to solve the problem of waste disposal in cities. Also, the cities can become self-reliant in terms of their power requirement.

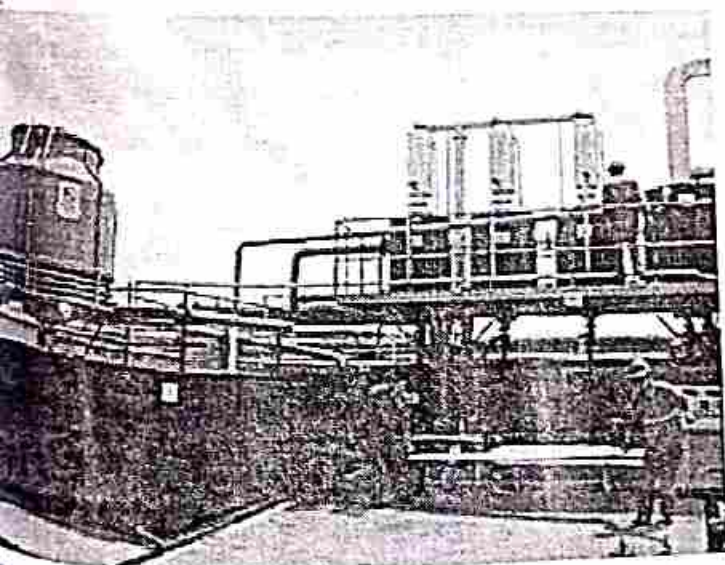


Figure 9.16 : A Plant for the Generation of Energy from Waste

The above energy resources are known as bio-fuels because they originate from the remains of dead...

- **Atomic Energy**: Splitting of the atoms of minerals like uranium and thorium can be used for power generation. In this process, using very small quantities of minerals, energy can be generated on a very large scale. Only a few countries in the world like India, U.S.A., Russia, France, Japan use atomic energy.



Figure 9.17 : An Atomic Power Generation Plant

* Process-based Energy Resources

- **Hydel Power**: Hydel power is the power obtained from the kinetic energy of running water. Hydel power does not cause any degradation of the environment. Also, the water used in generating power can still be used again. Bhakra-Nangal in the Punjab and Koyna in Maharashtra are examples of this.

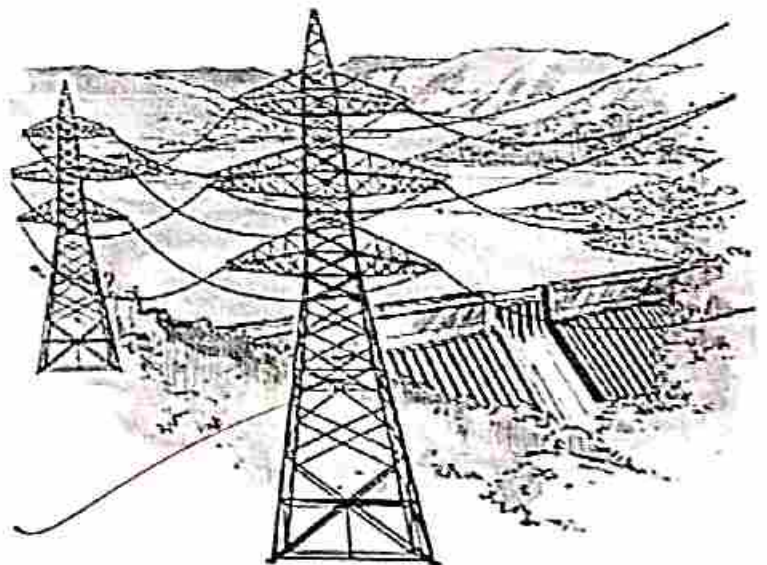


Figure 9.18 : Hydel Power

Name four hydel power stations in our State.



Do you know?

- Nowadays, electricity can be transmitted up to a distance of 800 km from the power generation centre without any transmission loss. Beyond this distance, it cannot be transmitted without loss.
- The power obtained from 1 kg of uranium is equivalent to the power obtained from 10,000 tonnes of coal.
(One tonne = 1000 kilograms).

- **Wind Energy:** Man has been using this resource since hundreds of years, for example, in sailboats. But nowadays, wind energy is being utilized for power generation. For power generation, a wind speed of 40 to 50 kmph is required. Due to this wind speed, the blades of the windmills turn, generating kinetic energy. This kinetic energy is further converted into electricity.

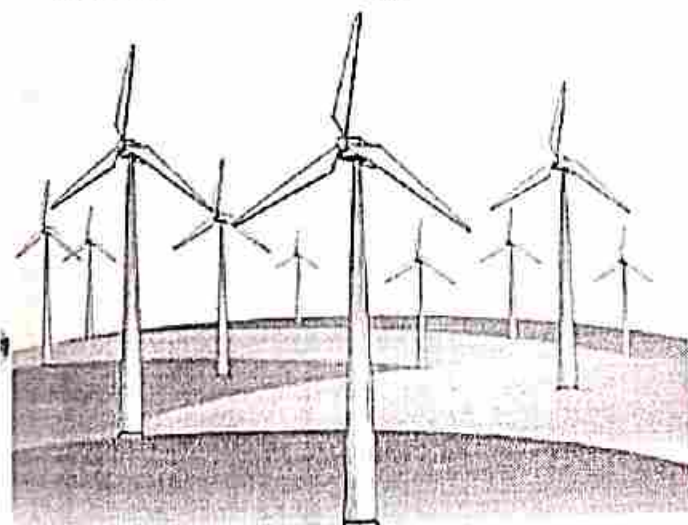


Figure 9.19 : Wind Energy

This electricity can be used for agriculture, domestic use and industries. In the States of Maharashtra, Karnataka, Tamil Nadu, etc. windmills have been erected at many places.

- **Solar Energy :** We get light and heat from the sun. We have seen that the intensity of solar energy is the maximum in the torrid zone. In a country like India which is in the torrid zone, there is a lot of scope for using this energy.

There is a solar power plant at Sakri in Haver district of Maharashtra. Devices like cookers, lamps, heaters, vehicles can be run on solar power. The generation of solar power depends on the intensity of sunrays and the duration of sunshine.

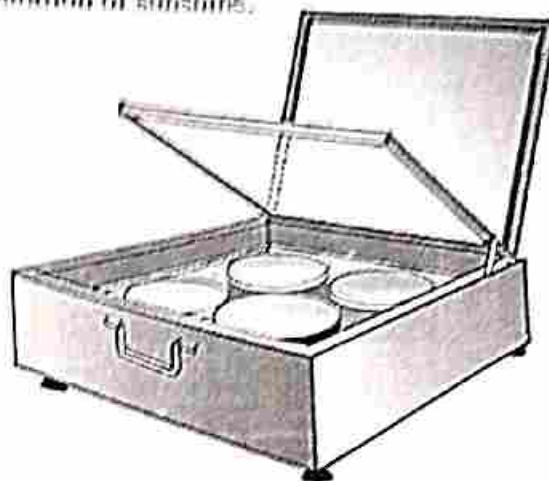


Figure 9.20 : A Solar Cooker

- **Tidal Energy :** Sea waves and tides are movements of ocean water that go on continuously. A technology has now been developed to generate power with the help of the speed and force of waves. Here, too, electricity is obtained from kinetic energy. This energy is pollution-free and everlasting. It can be used on a large scale in a peninsular country like India. Efforts are on to start such projects in India.

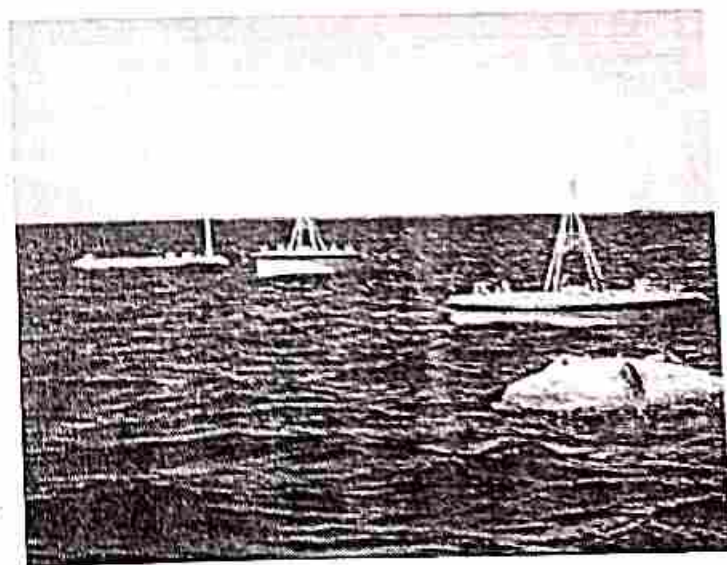


Figure 9.21 : Energy from Oceanic Water

Do you know?

There are some large-scale solar energy projects –

- Agua Caliente Solar Project (Arizona, U.S.A.)
- California Valley Solar Unit (California, U.S.A.)
- Golmud Solar Park (China)
- Charanka Solar Park (Patan, Gujarat)
- Welspun Energy Project (Madhya Pradesh)

Geo-thermal Energy : Hot water springs have always been an object of curiosity for man. They can be seen at Unapdeo, Vajreshwari, Manikaran, etc.

The temperature in the earth's interior increases by one degree Celsius (1°C) at a depth of every 32 metres. Man has now developed a process whereby this underground heat can be utilized to generate power. One such project is located at Manikaran, Himachal Pradesh in India.

All the above energy resources are abiotic. They cause minimum pollution. They are also known as inexhaustible energy resources.

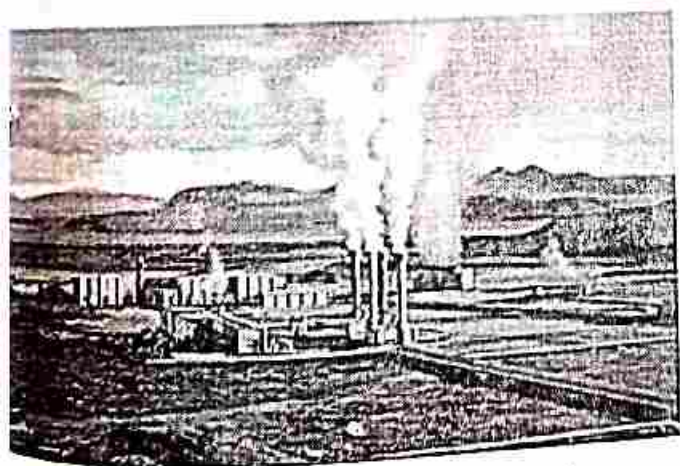


Figure 9.22 : A Geo-thermal Power Generation Centre

Do you know?

The distance from the earth's surface to its centre is 6373 km. The temperature at the centre is around 4000°C .



Do it yourself !

Form groups of five to eight. Each group should select one or two energy resources. They should use the following points to collect information about the resource they have selected. Collect it from the internet, reference books, newspapers, TV programmes, etc. and also through group discussions.

- Name of the energy resource
- Use of the energy resource
- Estimated cost of power generation
- Advantages and drawbacks in using the energy resource
- Cuttings, pictures, and other available data about the energy resource.
- Environment-friendliness of the energy resource.
- Other alternatives to the energy resource.

Compile the information and present it in the classroom. Choose the best and the most environment-friendly energy resource with the help of all the presentations.

Energy resources must be used very carefully. The demand for energy is increasing all the time due to growing population, urbanization and growing needs of man. It is necessary to use alternative and non-conventional energy resources to meet these needs. It is also necessary to use energy frugally. We must always avoid unnecessary use of electricity. It is easily possible for us to do so.



What will you do?

The whole family has decided that every week, a whole day's electricity is to be saved. What preparation will you make for this purpose?



I can do this!

- Identify the energy resources among natural resources.
- Tell the use of energy resources.
- Use energy resources judiciously.
- Give information about energy resources in India.
- Identify environment-friendly energy resources.



Exercises

(A) What resource will have to be used for the following work –

- (1) Rohan wants to fly a kite.
- (2) People in an Adivasi hamlet have to be protected from the cold.
- (3) Cooking on a picnic.
- (4) Salma wants to iron her clothes.
- (5) Starting a railway-engine.
- (6) Heating water for a bath.
- (7) After sunset, making light available inside the house.

(B) Answer the following questions.

- (1) Which energy resource does man use the most? Why?

(2) Why are energy resources needed?

(3) Why do we need to use environment-friendly energy resources?

(C) Explain the differences using the points in the brackets.

(availability, environment-friendliness, advantages and drawbacks)

(1) Mineral oil and solar energy

(2) Hydel power and power from geo-thermal source

Activity

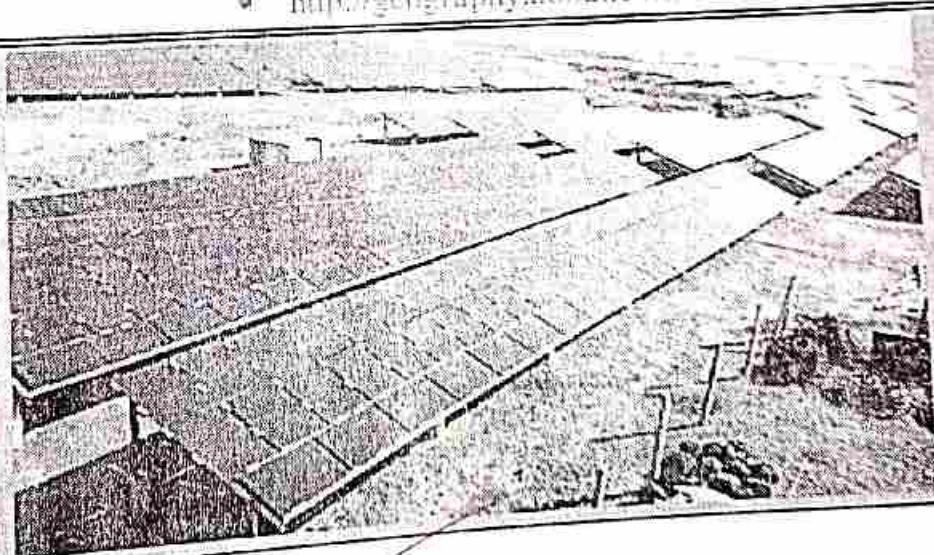
Show the power generation centres on an outline map of India. Write about one of them. Supplement the information with pictures.



Websites for reference

- <http://en.wikipedia.org>
- <http://www.sesky.org>
- <http://www.globalsecurity.org>
- <http://geography.about.com>

What kind of energy is produced with the help of the devices shown in the photograph?



ARIHANT EDUCATION FOUNDATION

NAME OF COLLEGE: Arihant College of Education
 EXAMINATION: Written Test
 COURSE NO.: 205 (07) Geography ROLL NO.: 09
 COURSE NAME: Understanding Discipline & Pedagogy of School Subject DATE: _____
 INVIGILATOR'S SIGN: [Signature]

Q.NO.	01	02	03	04	05	06	07	08	09	10	Total Marks (In- Figures)	Total Marks (In- Words)	Signature
Marks Obtained	17	9	2	9	10	7					54 80	fifty four	Vanshika

(Start Writing From This Page) $50/80 = \text{fifty}$ 19.5.25

Q1] THE SOLAR SYSTEM $\frac{1}{2} + \frac{5}{2} = \frac{6}{2} = 3$ 13

The solar system consists of different planets, satellites, asteroids, heavenly bodies, the sun, the moon and stars. Together they form the solar system.

* THE SUN

The sun is the centre of the solar system. All the planets revolve around the sun. It provides light and is the source of light for the Earth. The Earth takes 365 days to revolve around the sun. It is made up of heat and different gases.

* THE MOON

The moon is a natural satellite of the Earth. It revolves

~~around the Earth and has a map~~

around the Earth. It also gives some light to the Earth. It is smaller than the sun.

* SATELLITES

Satellites revolve around the other planets. There are natural (moon) and artificial (manmade) satellites in the solar system. Man made satellites helps in broadcasting information all around the world. Eg. Radio.

* ASTEROIDS

Asteroids are small clusters of rocky stones that are in the solar system. If they pass by the sun they fall on the Earth like shooting stars.

* HEAVENLY BODIES

The solar system also has different heavenly bodies like meteors, the milky way, the black hole etc.

* STARS

Stars are huge bodies in the solar system that have their own light. There are millions of stars in the solar system and they appear

like ~~an~~ tiny twinkling dots to the Earth.

PLANETS

There are 8 planets in the solar system. They are

1] Mercury

2] Venus

3] Earth

4] Mars

5] Jupiter

6] Saturn

7] Uranus

8] Neptune

1] Mercury

Mercury is the closest planet to the Earth. It is also the smallest. It is very hot and hence life on this planet is not very possible.

2] Venus

Venus is the second planet in the solar system. It is visible from the Earth. It is also called as Morning / Evening star. It is the brightest planet in the solar system.

3] Earth

Earth is the third planet in the solar system. It has

~~various languages and use a map~~

many water bodies and a balanced temperature. Life can only be found on the Earth. It's climate and other conditions are favourable to living things.

4] MARS

Mars is the fourth planet in the Solar System. It is also called a Red Planet due to its red soil. It is found that life can be possible ~~too~~ on Mars and humans have been trying to settle on Mars to reduce Earth's population. Mars has two satellites of its own. Eg: Mangalyan mission of India.

5]

Jupiter

Jupiter is the fifth planet in the Solar System. It is also the biggest planet in the Solar System. It has around 12 satellites (natural).

6] SATURN

Saturn is the sixth planet in the Solar System. It has many rings around the planet.

7] URANUS

Uranus is the seventh planet in the solar system. It also has rings around itself.

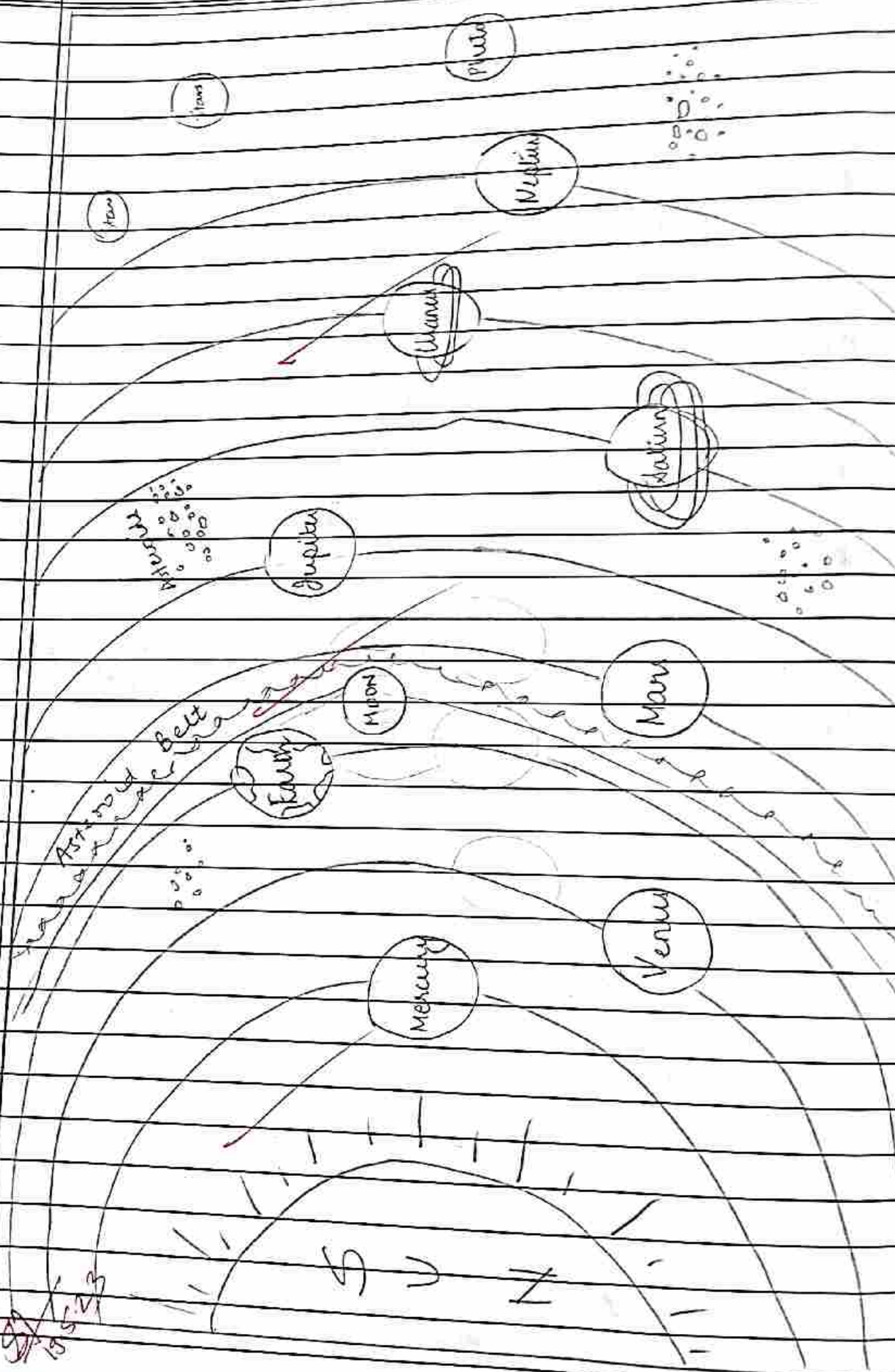
8] NEPTUNE

Neptune is the ~~se~~ eighth and the last planet in the solar system. Due to the large distance from the E. Sun, this planet is very cold. It is not possible to see Neptune from the Earth.

* PLUTO

Earlier Pluto was recognized as a planet but it is no longer a planet. It is called the Dead Planet but it is still a part of the solar system.

* DIAGRAM OF THE SOLAR SYSTEM *



~~12/2/23~~
~~15/5/23~~
~~15/5/23~~

TYPES OF WATER BODIES

There are many water bodies present on the Earth. Almost 70% of the Earth's surface is covered with water.

* OCEANS

There are 5 oceans on the Earth. Many smaller seas and water bodies meet the water ocean. There are many life forms in the ocean. The water is salty and not fit for drinking.
Eg: Indian ocean, Pacific ocean etc.

* SEAS

Seas are smaller than oceans. There are many seas in the world. The water is salty. There are different kinds of sea life in it. The rivers come and meet the sea at different water. The sea and ocean never dry up. There is water all round in the two water bodies.
Eg: Arabian sea, Bay of Bengal.

* RIVERS

There are many rivers all round the Earth. The largest river is Amazon and the longest is River Nile. The main water collects and fills
~~water~~ ~~arranges~~ ~~and~~ ~~use~~ ~~a~~ ~~map~~

the river. The water flows through stagnant. They flow through different parts and regions. The water from the river is used for different purposes like drinking, washing etc.
Eg: River Yamuna, Ganga, Amazon etc.

4. LAKES

Lakes are huge water bodies. Rainwater collects and form different lakes. Lake water does not keep flowing. It is still. There is some difference in lakes. It's water is also used for different purposes. Eg: Langit Lake
i) Sarsod Lake.

5. STREAMS

Streams are narrow passages of water that flow in different regions. Streams go and meet the rivers.

6. PONDS

Ponds are small water bodies that are stagnant. We can find small fishes in different ponds. Animals use ponds to drink water from.

11 Dams

Dams are manmade but they collect rainwater and here it becomes a water body who supplies clean drinking water to different places.
Eg: Khadakwasla Dam, Mulshi Dam.

12 CHANNELS

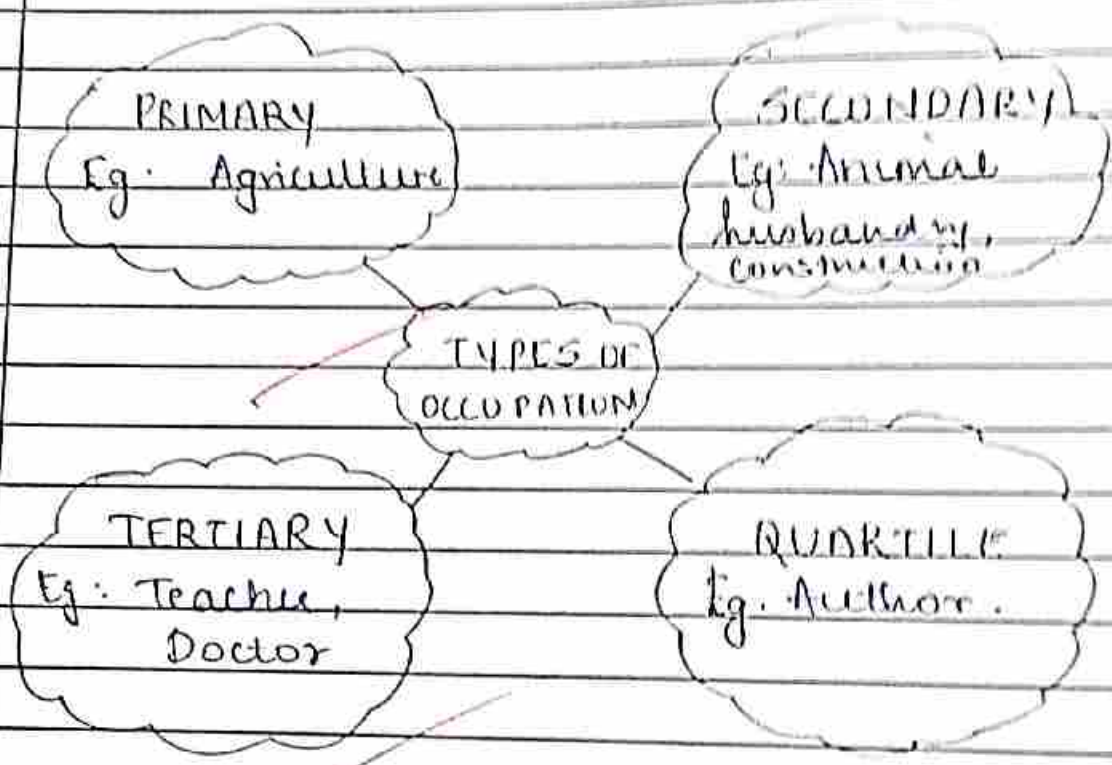
Channels are very thin flowing water bodies. They are formed due to rivers and rainwater.

Q27

main short answer type questions

Ans: a)

OCCUPATION
This occupation can be described as a job or an activity in which people engage in everyday. It is the work people do to earn their living / livelihood. It is also something people engage in without any external interruption.



17

PRIMARY OCCUPATION

Primary Occupation deals with harvesting and growing products on the land.

Eg: Agriculture.

4) SECONDARY OCCUPATION
Secondary Occupation deals with production and manufacturing of raw materials into finished goods.
Eg: Construction.

5) TERTIARY OCCUPATION
This is also called as the service sector. Different services are imparted to the people.
Eg: Doctors, Teachers, Banking etc.

4) Quartile Occupation
Specialization services that are based on intellectual abilities are called as Quartile occupations.
Eg: Author.

5) The last type of occupation is where people are in the role of decision-making. They take significant decisions.
Eg: CEO.

4) CAUSES OF POPULATION EXPLOSION

The population explosion refers to the sudden and dramatic increase in the density of population leading to problems like unemployment, poverty etc.

1. Early Marriage

In India, girls are married off early in many parts at the age of 15 and hence they start producing children from early age.

2. Decreased Death Rates

The death rates are decreasing due to advanced medication and medical services. The birth rates are increasing and death rates are decreasing.

3. Family Planning

People do not have knowledge of proper planning and are unaware of contraceptions and birth control.

4. Illiteracy

Illiteracy also plays a major role in population explosion. They lack the knowledge of family planning.

5. Religion

Religion also plays a role. Some religions do not believe in contraceptions and some religions want only a boy and hence keep producing until a boy is born.

Type of Job
People with white collar jobs have more children because they can afford it, they want to increase their legacy. Blue collar jobs women have less children.

FIELD STUDY

Field study is the branch of geography where people actually go to the field (place of study) to examine and study geographical properties and characteristics.

Importance of Field Study

- 1] Practical knowledge
Field study gives practical knowledge and gives a chance to see and study things in person.
 - 2] Accurate / Correct Information
Being able to go and study things by yourself gives scope to obtain correct information as it is better than theoretical knowledge.
 - 3] Satisfies Curiosity
It satisfies natural curiosity to discover, see, touch different things relating to study.
- ~~map use a map~~

ii) Comparative study field study
gives a chance to compare
the topic with other subjects/
things.

iii) Specialised study
In a way a
specialised study makes us
specialised in that field and
more extra information can be
discovered / extracted.

1 T 1 = 2
fill in the blanks.

1) Specialization services that are based on Intellectual abilities is called Quartile.

2) Lines that join places having equal temperatures are known as Isotherms.

3) The Ganga is known as Gangotri at Gomukh.

4) Bhakra Nangal multipurpose project is constructed on Ravi.

5) The Pathological Destruction of the Rock is due to Plants.

6) Match the following.

A	B
1) Confluence	X Arabian Sea
2) Aswan project	X Artificial lake
3) Delta of Ganga	✓ Sunderban
4) Indus River	X Nile River
5) Volga River	X Khartoum

Q4]

Ans: 4]

CORRELATION

Correlation is describing the degree of similarity between two different variables. It is describing the relationship between two different things.

* TYPES OF CORRELATION

i) Positive Correlation

Positive Correlation means that one variable has a positive relationship i.e. it reflects positively on / with the other variable it is compared to.

ii) Negative Correlation

Negative Correlation means that one variable has a negative relationship i.e. it reflects negatively on / with the other variable.

iii) Zero Correlation

Zero Correlation means that one variable has absolutely no relationship with the other variable.

ARHANT EDUCATION FOUNDATION

NAME OF COLLEGE: Arhant College of Education
 EXAMINATION: Written Test
 COURSE NO.: 1205(07)
 COURSE NAME: _____
 ROLL NO.: _____
 DATE: _____
 INVIGILATOR'S SIGN.: _____

Q.NO.	01	02	03	04	05	06	07	08	09	10	Total Marks (In- Figures)	Total Marks (In- Words)	Signature
Marks Obtained													

(Start Writing From This Page)

- * Correlation of Geography with History
- Geography and History have an intimate relationship with each other. In some schools they are also studied together as one subject i.e. Social Studies. History deals with man in relation of time and geography deals with man in relation of place.
- Eg① When teaching about the Harappa Civilization in history teacher can use a map to show where it was located, which water body caused floods and how water drowned the entire city.
- ② While teaching about Shivaji teacher can tell how geographical conditions helped him master the guerrilla technique and use a map

to show where the facts are located.

* Correlation of Geography with Science.

Geography and Science are also closely related. Minerals, natural resources, natural disasters are studied in both subjects. Climate and how it affects our health is one example.

Eg: Clothes of different regions, and food can be discussed in relation with each other.

Teachers can show on map which, how and why different regions wear different clothes and eat different food.

LEARNING RESOURCES.

Planning Resources or teaching aids are all the resources that a teacher uses to teach her lesson. It facilitates learning and, helps in easy understanding and increases interest level of students.

* Traditional learning resources.

1) Blackboard.

Blackboard is used in almost all school. Coloured chalks can be used to write important points, draw diagrams, maps etc.

2) Bulletin Board / Flannel Board.

These boards can be used to display different teaching aids like maps, photographs, charts, diagrams etc.

3) Charts

Charts are used to write, draw and are put them up in the classroom for students to see.

4) Maps

Maps are used to show and locate different places. Different maps like physical, political, world, state, can be used to teach geography effectively.

5] Flash Cards
Flash cards can be used to show important points and to write keywords.

6] Cartoons.
These can be used to increase the interest level of the learners.

7] Globe
Globes are 3D representations of the Earth and is useful in teaching geography significantly.

8] Diagrams.
Diagrams like of the structure of atmosphere, rainfalls, solar system are also traditional resources.

* Qualities of a Good Geography Teacher.

1] Thorough knowledge of subject matter

A good geography teacher should have complete and thorough knowledge of the subject matter to be able to teach effectively.

2] Should be able to handle maps / Globes
Maps and globes are an
integral part of this subject and hence
the teacher should be skilled at
handling ~~the~~ same.

3] Should be able to draw maps.
In case maps are not available,
teacher should be able to draw maps
on the board.

4] International Understanding / outlook
The teacher should have
international understanding and should
be able to do the same in the
minds of the children.

5] Should have Soft Skills.
The teacher should possess
soft / computer skills to be able to
use modern resources in the classroom
and to show different videos.

6] Good Planner
She should be able to
plan lessons well, plan field
trips and excursions to
different places.

10
7] Should be able to use different methods of teaching
An ideal geography teacher
should use different methods like journey,
discussion, project etc.
excursion.

$$Q.6 \frac{b}{3} + \frac{a}{3} = 7$$

Q6] Write any 2 questions.

Ans: a] Internal Criteria of a Good Geography Text Book.

1] Preface
The textbook should have a suitable preface which welcomes the students and mentions the educational objectives.

2] Effective Introduction
The textbook should have an effective introduction.

3] All chapters should start on a fresh page.

4] The index should be organized, numbered and have page no's mentioned.

5] The book should have attractive and colourful illustrations.

6] Chapters should have maps as and when needed.

7] There should be a library.

8] At the end of the lesson, there should be sufficient activities.

and exercises for children to solve.
It should also have creative projects.

The printing should be neat, with different fonts and font size, no grammatical errors and spacing should be even and uniform.

Subject matter should be interesting and according to the level of the students.

Need of Geography Room
A Geography room is a separate room where all geographical resources like maps and globes are kept and it is a space where students can learn geography effectively.

NEED.

1) Saves Time and Effort of teachers.

It takes time for teachers to carry the maps to and from the room to show students - In a geography room, everything is already available.

2) Does not damage anything

During the transition of maps, globes etc., the maps can get damaged and the globes are heavy and can fall and break. So such things are avoided in Geography rooms.

3) Change of scenery
Learning outside the
classroom is always interesting to
the students. Hence, in geography
rooms, students will be more
inclined to learn.

4) Utility of Resources
Sometimes even though
maps are available in school, time
constraints and different reasons stop
the teacher from making use of
such resources. Here, the teacher
makes use of everything available.

5) Provides Practical knowledge
Geography rooms provide
practical knowledge to students.
They get to learn things from
outside the textbook and hence
it helps in long lasting understanding
of subject matter.

6) Hands - ON learning
The children will be able
to manipulate, touch and handle
different resources. It caters to
kinesthetic and all basically all
types of learners. It increases the
interest level of children.