

**KERALA PUBLIC SCHOOLS**  
**ACADEMIC YEAR 2020-21**  
**HOME ASSIGNMENT**



**CLASS : X**  
**DATE: 17.11.2020 to 2.12.2020**

SUBJECT	ASSIGNMENT															
<b>MATHS</b>	Chap-10 Circles [Ex-10.1, 10.2] Chap-11 Constructions [Ex-11.2] Chap-13 Volume and Surface Area [Ex-13.1, 13.2, 13.3, 13.4, 13.5]  NOTE: [ Std X Sums to be practiced from R .S .Aggarwal also]															
<b>SCIENCE</b>	<p><b><u>BIOLOGY</u></b> <b><u>CH – 15 Our Environment (NCERT Q/ANS)</u></b></p> <p>Q1) What are trophic levels? Give an example of a food chain and state the different levels in it.</p> <p>A1) Each step or level of the food chain forms a trophic level. Consider the following food chain:</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"><tr><td style="border: 1px solid black; padding: 5px; text-align: center;">Plants</td><td style="text-align: center; padding: 0 10px;">➔</td><td style="border: 1px solid black; padding: 5px; text-align: center;">Deer</td><td style="text-align: center; padding: 0 10px;">➔</td><td style="border: 1px solid black; padding: 5px; text-align: center;">Tiger</td></tr><tr><td style="text-align: center;">Producers</td><td></td><td style="text-align: center;">Primary Consumers</td><td></td><td style="text-align: center;">Secondary Consumers</td></tr><tr><td style="border: 1px solid black; padding: 5px; text-align: center;">1<sup>st</sup> Trophic Level</td><td></td><td style="border: 1px solid black; padding: 5px; text-align: center;">2<sup>nd</sup> Trophic Level</td><td></td><td style="border: 1px solid black; padding: 5px; text-align: center;">3<sup>rd</sup> Trophic Level</td></tr></table> <p>Q2) What is the role of decomposers in the ecosystem?</p> <p>A2) The roles of the ecosystem are:</p> <ul style="list-style-type: none"><li>i) They help in breaking down the complex organic substances into simple inorganic substances that go into the soil and are used up by the plants.</li><li>ii) They maintain the nutrient pool of the earth by putting back various elements back into the pool. In this way, they act as cleansing agents of nature.</li><li>iii) They help in maintaining the fertility of the soil by adding humus content to it.</li></ul>	Plants	➔	Deer	➔	Tiger	Producers		Primary Consumers		Secondary Consumers	1 <sup>st</sup> Trophic Level		2 <sup>nd</sup> Trophic Level		3 <sup>rd</sup> Trophic Level
Plants	➔	Deer	➔	Tiger												
Producers		Primary Consumers		Secondary Consumers												
1 <sup>st</sup> Trophic Level		2 <sup>nd</sup> Trophic Level		3 <sup>rd</sup> Trophic Level												

Q3) Why are some substances biodegradable and some non-biodegradable?

A3) Substances that are broken down by biological processes are said to be biodegradable. In our environment, many of the substances are broken easily by decomposers (bacteria and fungi) as they possess specific enzymes for such activity. However, there are other substances which are not broken down in this manner and are called non-biodegradable substances. Since these substances are not degraded by bacteria and fungi, they persist for a long time. These non-biodegradable substances will be acted upon by physical processes like heat and pressure.

Q4) Give any two ways in which biodegradable substances would affect the environment.

- i) They may cause foul smell during decomposition process
- ii) They may produce harmful gases such as ammonia, carbon dioxide, etc. which can further cause global warming.

Q5) Give any two ways in which non-biodegradable substances would affect the environment.

- i) These inert substances simply persist in the environment. This means that such substances require land for dumping.
- ii) Excess of fertilizers, pesticides and other chemicals changes soil chemistry and also affects aquatic life.
- iii) Most of these chemicals and heavy metals are easily absorbed by organisms. This causes biological manifestation.

Q6) What is ozone and how does it affect any ecosystem?

A6) Ozone ( $O_3$ ) is a molecule formed by 3 atoms of oxygen. At the higher levels of the atmosphere, it shields the surface of the earth from the ultraviolet radiation of the Sun. It may affect ecosystem in the following ways:

- i) At the surface of the earth, it is a deadly poison for all lower forms of life.
- ii) If this layer gets depleted, then it may cause cancer in human beings and also in plants and animals.

Q7) How can you help in reducing the problem of waste disposal? Give any two methods.

A7)

- i) By changing our lifestyle and change in attitude will reduce disposable waste.
- ii) Reducing packaging.
- iii) Recycling waste
- iv) Preparing compost of biodegradable waste.

### **CHEMISTRY – CHAPTER 5 PERIODIC CLASSIFICATION OF ELEMENTS (REVISION )**

1. Answer the following questions : (Very Short Answer Type Questions.)
  - (i) State the modern periodic law of classification of elements.
  - (ii) Out of the three elements P, Q and R having atomic numbers 11, 17 and 19 respectively ,which two elements will show similar properties and why?
  - (iii) On moving from left to right in the second period what happens to the number of valence electrons?
  - (iv) Write any one difference in the electronic configurations of group –1 and group -2 elements.
  - (v) Atomic number of an element is 16. Write its configuration. Find the number of valence electrons and its valency.
2. Answer the following questions : ( Short Answer Type Questions.)
  - (i) An element X has atomic number 13.
    - (a) Write its electronic configuration.
    - (b) State the group to which X belongs.
    - (c) Is X a metal or a non-metal?
    - (d) Write the formula of its bromide.
  - (ii) How can the valency of an element be determined if its electronic configuration is known? What will be the valency of an element of atomic number 9?
  - (iii) Why do all the elements of the (a) same group have similar properties, (b) same period have different properties?
  - (iv) How does the metallic character of elements change along a period of the periodic table from the left to the right and why?
  - (v) How does the size of atoms of elements vary down a group in the periodic table? Why is it so?
3. Answer the following questions : (Long Answer Type Questions.)
  - (i) Atomic number of a few elements are given below.  
10, 20, 7, 14

- (a) Identify the elements.
  - (b) Identify the group number of these elements in the periodic table.
  - (c) Identify the periods of these elements in the periodic table.
  - (d) What would be the electronic configuration for each of these elements?
  - (e) Determine the valency of these elements.
- (ii) Which group of elements could be placed in Mendeleev's Periodic Table without disturbing the original order? Give reason.

## CHAP 11 -HUMAN EYE AND THE COLOURFUL WORLD

### TOPIC-

- Refraction of light through a prism
- Dispersion of White Light by a Glass prism
- Dispersion of light in nature
- Scattering of light

Q1.What is dispersion of light?

Ans-The phenomenon of splitting white light into seven colours when it passes through a glass prism is called dispersion of light.

Q2.What is the cause of dispersion of light?

Or

State the cause of dispersion of white light by a glass prism.

Ans- When white light passes through a glass prism ,its constituent colours (red, orange, yellow, green ,blue, indigo ,violet) travel with different speeds in the prism .This causes the dispersion of light.

Q3.Arreng constituent colours of white light in descending order of their wavelengths.

Ans- Red, Orange, Yellow, Green ,Blue, Indigo,Violet

Q4.Name the component of white light that has greatest wavelength.

Ans-Red

Q5.Name the components of white light that deviates (i)the lease and (ii)the most while passing through a glass prism.

And-(i) red colour

(ii) violet colour

Q6.Name the phenomenon occurring in nature due to dispersion of light.

Ans-Rainbow

Q7.Name the three phenomenon of light responsible for the formation of rainbow in the sky.

Ans- (i) Refraction(ii)dispersion (iii) internal reflection of light

Q8. Name the colours that suffer maximum and minimum deviation respectively while passing through a prism.

	<p>Ans -Red colour suffers minimum deviation and violet colour suffers maximum deviation.</p> <p>Q9.Define Angle of Deviation.</p> <p>Ans -The angle between the directions of incident ray of light and emergent ray of light is called Angle of deviation of the ray of light passing through the prism.</p> <p>Q10. What do you mean by scattering of light?</p> <p>Ans-When light falls on tiny particles ,this light is absorbed by these particles .Then these particles re-emit light in all directions .This process is known as scattering of light.</p>
<p><b>HINDI</b></p>	<p><b>हिन्दी साहित्य</b></p> <p><b>पाठ - साना-साना हाथ जोड़ी (मधु कांकरिया)</b></p> <p>*यात्रा वृतांत को ध्यानपूर्वक पढ़ें</p> <p><b>1. झिलमिलाते सितारों की रोशनी में नहाया गैंगटॉक लेखिका को किस तरह सम्मोहित कर रहा था ?</b></p> <p>उत्तर. झिलमिलाते सितारों की रोशनी में नहाया गैंगटॉक ऐसा लग रहा था मानो आसमान उल्टा पड़ा हो और सारे तारे बिखरकर नीचे टिमटिमा रहे हो  सितारों के गुच्छे रोशनियों की एक झालर —सी बना रहे थे   गैंगटॉक का यह रहस्यमयी सौंदर्य लेखिका को सम्मोहित कर रहा था   गैंगटॉक के सौंदर्य के प्रभाव के सम्मुख लेखिका को अपना सब कुछ अर्थहीन लग रहा था  उसकी चेतना में भीतर-बाहर सब कुछ शून्य लग रहा था  </p> <p><b>2. गैंगटॉक को ‘मेहनतकश बादशाहों का शहर’ क्यों कहा गया ?</b></p> <p>उत्तर. गैंगटॉक के स्त्री-पुरुष अत्यंत परिश्रमी थे  उनकी मेहनत के परिणामस्वरूप ही हिमशिखरों से टक्कर लेते पहाड़ों पर रास्ते बनाए  मकान ,दुकान और होटलों का निर्माण किया   गैंगटॉक को मेहनतकश बादशाहों का शहर कहने का एक कारण यह भी हो सकता है कि भारत में विलय से पूर्व यहाँ राजतंत्र था  उन बादशाहों की सूझबूझ और मेहनतकश स्त्री-पुरुष के कारण ही सुंदर गंतोक शहर का निर्माण हो सका  </p> <p><b>3.कभी श्वेत तो कभी रंगीन पताकाओं का फहराना किन अलग-अलग अवसरों की ओर संकेत करता है /</b></p> <p>उत्तर.शहर से दूर फहराती श्वेत पताकाएँ शोक के अवसर की ओर संकेत करती है  श्वेत पताकाएँ किसी बुद्धिस्ट की मृत्यु पर उसकी आत्मा की शांति के लिए फहरायी जाती हैं  रंगीन पताकाएँ किसी नए कार्य की शुरुआत के अवसर की ओर संकेत करती है  </p> <p><b>4.प्रकृति ने जल —संचयन की व्यवस्था किस प्रकार की है ?</b></p> <p>उत्तर. प्रकृति सर्दियों में बर्फ के रूप में जल —संग्रह कर लेती है और गरमियों में पानी के लिए जब त्राहि-त्राहि मचती है तो बर्फ शिलाएँ पिघल-पिघल जलधारा बनकर लोगों की प्यास बुझाती हैं  इस प्रकार प्रकृति ने जल-संचयन की कितनी अद्भुत व्यवस्था की है  </p> <p><b>5.इस यात्रा-वृतांत में लेखिका ने हिमालय के जिन-जिन रूपों का चित्र खींचा है,उन्हें अपने शब्दों में लिखिए-</b></p> <p>उत्तर- इस यात्रा —वृतांत में लेखिका ने हिमालय के प्राकृतिक ,भौगोलिक तथा आध्यात्मिक रूप के चित्र खींचे हैं  हिमालय की फूलों से भरी वादियों और घाटियों के सौंदर्य का चित्र खींचा है  उसने हिमालय की हिमाच्छदित पहाड़ियों का भी चित्र अंकित किया है  हिमालय के पहाड़ों से झरते झरनों ,घटाओं के गहराने ,उसके कच्चे-पक्के</p>

रास्तों के साथ-साथ वीरान,सँकरे,घुमावदार तथा खतरनाक रास्तों के चित्र खींचे हैं |इस प्रकार लेखिका ने हिमालय के सौंदर्यपरक स्वरूप के साथ-साथ भयावह रूप का भी चित्रण किया है |

**6.प्राकृतिक सौंदर्य के अलौकिक आनंद में डूबी लेखिका को कौन-कौन से दृश्य झकझोर गए ?**

उत्तर. प्राकृतिक सौंदर्य के अलौकिक आनंद में डूबी लेखिका को प्राकृतिक सौंदर्य से निरपेक्ष कुछ पहाड़ी औरतों के पहाड़ पर बैठकर पत्थर तोड़ने ,अपनी कमर परअपने कमर पर अपने बच्चों को बाँधने ,हाथ में हथौड़े और कुदाल को पूरी ताकत से जमीन पर मारने के दृश्य झकझोर जाते हैं | इतने स्वर्गीय सौंदर्य के बीच भूख ,मौत,दैन्य और जिंदा रहने की जंग तथा मातृत्व और श्रम —साधना के दृश्य भी उसे झकझोर जाते है |

**हिंदी भाषा-**

\*अनुच्छेद लेखन- राष्ट्रीय एकता या छात्र जीवन में अनुशासन का महत्त्व |

**ENGLISH**

**TOPIC – THE TALE OF CUSTARD THE DRAGON(POEM)**

**SUMMARY**

The tale of custard the dragon is a ballad. It is a humorous poem about a cowardly dragon named custard. Custard is a pet of Belinda, a little girl who lives in a little white house with her pets.

She had a black kitten named ink, a grey mouse named blink, a yellow dog mustard and a cowardly dragon custard. The poet says that all of them are very brave except the dragon. Others were described as brave and are compared with animals like bear, tiger or lion but the dragon is very timid.

He always demands a safe place for himself. All the other characters make fun of him.

But one night they are surprised by the entry of a pirate in the house. All of them get frightened and start hiding here and there.

But to everyone’s surprise, the dragon not only tackles him but also eats him up. As all of them are saved by custard, they thank him.

But at the end, they realize that they used to make fun of the dragon because of his being timid. So, all of them suddenly start saying that they are braver and could have handled the situation in a much better way.

Here the poet has tried to say that sometimes a timid person is the actual hero in the toughest situations of life.

**LITERARY DEVICE**

Rhyme scheme: Stanza 1 to 12 - aabb ; Stanza 13 – aabbcc; Stanza 14&15-aabb  
 Repetition: Suddenly, suddenly they heard ; She cried Help ! Help!  
 Simile: Mouth like a fireplace; Belinda was as brave as a barrel ; Shorting like an engine  
                   Dashed his tail like irons in the danger ; Went at pirate like Robin at the worm.

Alliteration – And he held in his teeth  
 Anaphora: repeated use of word at the start of two consecutive lines. (And a little

....And a realio)

Refrain: Repetition of a sentence again and again (And a realio, trulio,)

poetic license: realio, trulio for real, true. The spellings have been changed to create a musical effect

### **ANSWER THE FOLLOWING QUESTIONS**

Q1- Who are the characters in this poem? List them with their pet names.

A1 Following are the characters of the poem:

A little girl named Belinda.

A little black kitten whose name is ink.

A little gray mouse named blink.

A dog named mustard because he is yellow in colour.

A dragon whose name is Custard.

Q2- Why did Custard cry for a nice safe cage? Why is the dragon called “cowardly dragon”?

A2- Custard cries for a safe cage because he is a coward. He is called cowardly dragon because other characters are defined to be very brave in the following manner: Belinda is described to be as brave as a barrel full of bears; Ink and blink can chase lions down the stairs ; Mustard was as brave as a tiger in rage.

Q3- Describe the appearance of the dragon.

A4- The looks of the dragon are explained in a way that it has big sharp teeth and spikes on top. This means its skin is pointed on the top. On the lower part it has scales which are bony plates meant to protect the skin. His mouth has been compared to a fireplace because it is assumed that the dragons can release fire from the mouth. Even his nose is compared to a chimney which is used to pass out the smoke. His feet are like a sharp knife i.e. a dagger.

Q4- Writers use words to give us a picture or image without actually saying what they mean. Can you trace some images used in the poem?

A4- Following are the words used to give us picture or image:

Mouth like a fireplace

Chimney for nose

Barrel full of bears

Brave as a tiger in the rage

He went at the pirate like a robin at a worm

Q 5 Is there a hidden message that the poet is wishing to convey or do you think that entertainment is the sole purpose of writing this poem?

A 5. The interpretation of the message in the poem may vary for different readers.

The situation narrated underscores a basic truth that the real test of courage is during crises .The dragon though never put his strength on display but exhibited it in action when it was required to do so.

### **Long Answer Type Question**

Q. Do you find ‘The Tale of Custard the Dragon’ to be a serious or a light-hearted poem? Give reasons to support your answer.

**Answer:**

‘The Tale of Custard the Dragon’ is a very light and funny poem meant to be enjoyed by everyone. The way the poem has been written with a fix rhyme scheme, makes it very easy and enjoyable to read. The poet has even used wrong spelling to maintain

the rhyme scheme. The features of Belinda and her pets described in the poem make it quite funny. Belinda's bravery has been compared to a barrel full of bears, a liquid substance. All the tiny creatures such as the kitten and the mouse have been shown so brave that they can scare a lion and the dog's bravery is like a tiger's rage. The biggest of them all, the dragon is the only one, who has been shown as a coward and soft being, who looks for a cage for himself, which is very ironic, hence making the poem funny.

**Answer the following question in 100 words.**

1. 'Bravery is spontaneous' Explain with reference to the poem.

### **Topic - THE MAKING OF A SCIENTIST (PROSE)**

#### **INTRODUCTION**

Richard Ebright has received the Searle Scholar Award and the Schering Plough Award for Biochemistry and Molecular Biology. It was his fascination for butterflies that opened the world of science to him. The story is about Richard H. Ebright who grew up in the town of Reading in Pennsylvania, USA. As he did not have much to do there, collecting things was his hobby. He used to collect butterflies as a child in kindergarten. Let's read how this curious child who collected butterflies went on to become one of the greatest scientists of the world.

#### **SUMMARY**

The chapter, 'The Making of a Scientist' is a story about the famous scientist Richard Ebright. Richie as his mother used to call him was a very curious child right from his childhood. He had started collecting butterflies in his childhood and when he was 2 years old, he had already collected all the 25 species found near his hometown. He thought it to be an end of butterfly collection until one day his mother bought him a book named 'The Travels of Monarch X'.

This was a turning point in his life and he got much more interested in dealing with science. He started with tagging butterflies which a task given at the end of the book that his mother bought for him. Then, when he first entered the county science fair with a slide of the frog tissue he lost. Everybody won something but his project did not win any prize. He was sad but also understood that to win, he needed to do real experiments and not just make neat and clean models. Then he wrote down to Dr. Urquhart at the University of Toronto, asking him for ideas to make projects.

He stayed busy during his high school, working on the long list sent to him by Dr. Urquhart. Then, for the next year's fair, he chose the project of looking at the viral disease that killed nearly all the monarch caterpillars every few years. He thought that the reason for this could be a beetle, so he started raising caterpillars in the presence of beetles but could not get any results. So, when he showed his trial experiment at the county science fair, his project won a prize.

Then for the next year he made an experiment to show that the viceroy butterflies copied monarchs. This project also made him win prizes. Then he started his research as to the purpose of the 12 golden spots on the back of a monarch pupa.

Everybody believed that it was just a design but Dr. Urquhart thought otherwise.

Then Ebright and another brilliant science student got together and made a device that could show that the gold spots were responsible for releasing a hormone that was necessary for its growth.

With the help of sophisticated instruments at one of the labs, he got a chance to work and found the chemical structure of the hormone in the gold spots. Then, one day, while looking at the photo of the chemical structure, he solved one of the biggest puzzles of life.

He came to know how a cell blueprints its DNA. It was a big breakthrough and was published in a magazine. He also had many other interests and also admired his social studies teacher as he was the one who used to give him new ideas. He was good at debating, public speaking and a great canoeist.

He never used to win for the sake of winning or for prizes but because he wanted to be the best at whatever he used to do. It is shown in this chapter that with the right amount of curiosity, a bright mind and the will to win for right reasons are the qualities needed to be a scientist.

His mother also played a big role in making him what he was as it was she who supported him throughout his journey and bought him the book 'The Travels of Monarch X' which aroused his curiosity in the field of science.

### **Short Answer Type Questions**

Question 1.

What lesson does Ebright learn when he does not win anything at a science fair?

Answer:

Ebright exhibited slides of frog tissues at a science fair. He did not get any prize. He learnt an important lesson that science is not just about display. It is about projects and experiments. He began conducting experiments from that day onwards.

Question 2.

What experiments and projects did Ebright undertake?

Answer:

He undertook many projects and experiments. He worked on viceroy butterflies to show that they copied monarch butterflies. He studied bright spots on the monarch pupa and discovered a new hormone. Also, he found out how cells read their DNA.

Question 3.

What are the qualities that go into the making of a scientist?

Answer:

There are three essential qualities that make a scientist. The first is a first rate mind. Next is the presence of curiosity. Last but not the least, it is the will to do the best and win.

Q 4 Comment on the role played by Richard's mother in his success.

Or

How did Ebright's mother help him in becoming a scientist?

Answer:

Richard's mother made Richard the centre of her life. She would buy microscopes, telescopes and books for him. She arranged trips for him and would also prepare difficult tasks for him. This helped him to learn a lot.

Q 5 How did 'The Travels of Monarch X' prove a turning point in his life?

Answer:

Richard was bored with collecting butterflies. At this time, his mother got the book

'The Travels of Monarch X' for him. After reading the book, he studied the migration of butterflies and it opened the world of science to him.

**Long Answer Type Questions**

**Question 1.**

Richard's mother had a great influence on him. Discuss.

Or

Discuss the role of Ebright's mother in making him a scientist.

**Answer:**

Richard's mother played a huge role in making him a great scientist. She would take him on trips to encourage learning. He was a single child. After his father died, his mother made him the focus of her life. She would buy him all kinds of microscopes, telescopes and other equipment. After dinner, she gave him problems to solve. This helped Richard to learn a lot. She was his only companion for a long time. It was his mother who got him the book 'The Travels of Monarch X'. This book opened the world of science for Richard. She also wrote to DrUrquhart to guide her son. The scientist helped Richard and guided him. Thus, his mother actually shaped him into an extraordinary scientist.

**Answer the following questions (30-50 words)**

1. Why did Ebright lose interest in tagging butterflies?
2. Mr. Weiherer pays a glowing tribute to Richard. What did he say?
3. What other interests, besides Science, did Richard Ebright pursue?

**Answer the following in 100-120 words**

1. "Richard Ebright was a successful scientist who gave a new theory of cells to the scientific world".Elucidate.

**LANGUAGE**

**ANALYTICAL PARAGRAPH**

1. Read the following excerpt from an article that appeared in the magazine section of a

local daily:

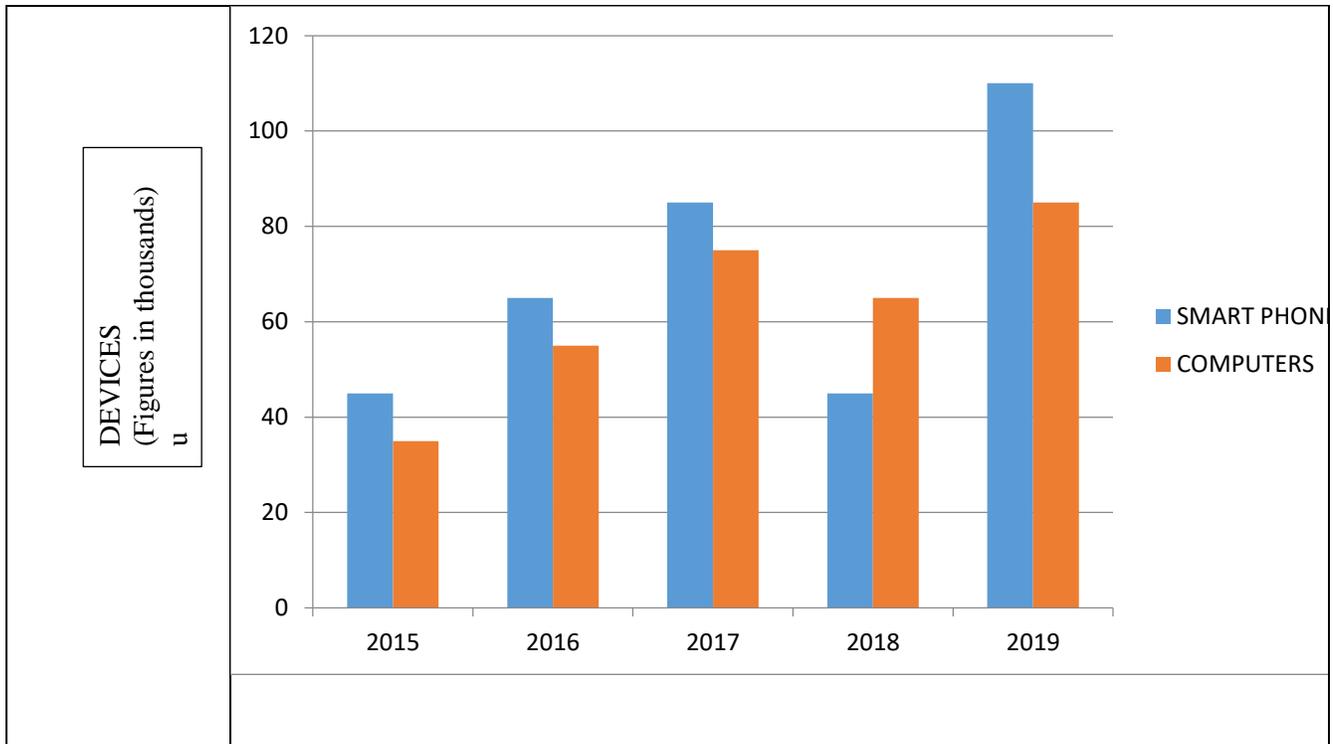
*The ban on single-use plastic is impractical. The purpose of articles like bags and packaging is ultimately to make human life easier. Plastic articles do this well, so they shouldn't be banned.*

Write a paragraph to analyze the given argument in **100-120** words. You could think about what alternative explanations might weaken the given conclusion and include rationale / evidence that would strengthen / counter the given argument.

2. The chart below displays data about the number of digital devices purchased in

Rishunagar across the years 2015-2019. Write a paragraph analyzing the given data in **100-120** words.

## DIGITAL DEVICES PURCHASED ACROSS YEARS IN RISHUNAGAR



### SOCIAL STUDIES

**Sub: Geography**

**Ch. Manufacturing Industries**

**Read the chapter and underline the difficult words. Go through the multiple choice and very short questions. Multiple choice questions and very short questions are not to be written in the note book.**

**Short type and long type questions and answers to be written in the note book.**

1. Which one of the following agencies markets steel for the public sector plants?

- (a) HAIL
- (b) SAIL
- (c) Tata Steel
- (d) MNC

Ans.a

2. Which one of the following does not influence industrial location?

- (a) Raw material
- (b) Capital and power
- (c) Market and labour
- (d) Underground railway line

Ans.d

- (a) Alaknanda river
- (b) Son river

(c) 3. Most of India's jute mills are located on the banks of Hooghly river

(d) Yamuna river

Ans.C

4. Which one of the following industries manufactures telephones, computer, etc.?

(a) Cement

(b) Iron and Steel

(c) Electronic

(d) Chemical

Ans.C

5. . TISCO is

(a) Joint Sector Industry

(b) Private Sector Industry

(c) Co-operative Sector Industry

(d) Public Sector Industry

Ans.B

6. Industries that use minerals as raw material are called

(a) Agro-based industries

(b) Forest-based industries

(c) Basic industries

(d) Mineral-based industries

Ans.D

7. The industries that produce goods for direct use by consumers are called

(a) Key industry

(b) Small-scale industry

(c) Consumer industry

(d) Heavy industry

Answer: c

8.. The first cotton mill of India was set up in

- (a) Ahmedabad
- (b) Kolkata
- (c) Mumbai
- (d) Coimbatore

Answer: c

9. . Which country is the major importer of Indian yarn?

- (a) Indonesia
- (b) Bhutan
- (c) Japan
- (d) Spain

Ans. C

10. Air pollution is caused by

- (a) Organic and inorganic industrial effluents discharged into rivers.
- (b) Presence of high proportion of sulphur dioxide, carbon monoxide and air-borne particulate materials.
- (c) Unwanted sounds from industries, generators, saws and pneumatic and electric drills.
- (d) Overdrawing of groundwater.

Answer: b

### **Short Answer Type Questions**

1. Classify industries on the basis of capital investment. How are they different from one another? Explain with examples.

Ans. On the basis of capital investment, the industries are classified into small scale industry and large scale industry.

- The maximum investment in small scale industry is up to 1 crore, e.g., toy industry.
- If the investment is more than one crore rupees, then it is known as large scale industry, e.g., iron and steel industry.

2. “The textile industry is the only industry in the country which is self-reliant and complete in the value chain”. Justify the statement.

Ans. The textile industry is the only industry in the country which is self-reliant and complete in the value chain i.e. from raw materials to the highest value added products.

**The statement can be justified as follows:**

- Textile industry is dependent on agriculture and provides jobs to farmers, cotton boll pluckers and workers engaged in ginning, spinning, weaving, dyeing, packaging, tailoring and sewing. The industry by creating demand support industries like dyeing.
- It contributes significantly to industrial production. India has world-class production in spinning and capable of using all the fibers that are produced.
- Textile industry has been a major foreign exchange earner with increase in foreign trade across the world.
- It contributes significantly to the National GDP.

3. Classify industries on the basis of source of raw material. How are they different from each other?

Ans. On the basis of the sources of raw materials used industries are classified into agro-based industries eg cotton, silk, rubber, tea etc. and mineral based industries, e.g., iron and steel, cement etc.

**They are different from each other in the following ways:**

- Agro based industries are based on agricultural raw materials, e.g. cotton, wool, sugarcane etc. Mineral based industries use minerals and metals as raw materials e.g. iron ore, bauxite etc.
- Agro based industries depend on manufacturing industries for machinery, tools and implements. On the other hand, mineral based industries feed manufacturing industries

4. Suggest any three steps to minimize the environmental degradation caused by the industrial development in India.

Environmental degradation can be minimized by

- Proper fuel selection and utilization, e.g., CNG should be used in automobiles instead of diesel or petrol.
- Equipment to control aerosol emissions like inertial separators, filters, precipitators and scrubbers should be used.
- Smoke can be prevented by the use of oil instead of coal in industries.

5. India is an important iron and steel producing country in the world. Yet we are not able to perform to our full potential". Suggest and explain any three measures to get full potential.

**Ans. The following measures can enable us to perform to our full potential:**

- Liberalisation and Foreign Direct Investment can encourage our entrepreneurs to boost production.
- Resources need to be allocated for research and development to add up steel production.
- Apart from this regular supply of coking coal and electricity has to be dealt with.

- Productivity of labour needs to be increased through proper training.
- Efficient system of roadways and railways has to be maintained for quick delivery of raw material and finished goods.
- Moreover domestic demand of iron and steel has to be increased

6. Classify industries on the basis of their main role. How are they different from each other?

**Ans. According to their main role the industries are classified as:**

- Basic or key industries. These industries supply their raw materials to manufacture other goods, e.g., iron and steel, copper smelting etc.
- Consumer industries. These industries produce goods for direct consumption by consumers, e.g., sugar, fans paper, toothpaste, etc.

7. Explain with examples, how do industries give boost to the agriculture sector?

Ans. The economic strength of the country depends upon the development of manufacturing industries. Manufacturing industries give major boost to agriculture in the following ways.

- Manufacturing industries not only help in modernising agriculture, but also reduces the dependence of people on agricultural income by providing jobs in secondary and tertiary sectors.
- Agro industries boost agriculture by increasing its productivity. They depend on raw materials from agricultural sector.
- The industries sell their products like irrigation pumps, fertilisers, insecticides, pesticides, machines and tools to the farmers. The manufacturing industries thus make production process efficient.
- Industries boost agriculture by transporting the goods produced to various markets.

8. "Agriculture gives boost to the industrial sector." Support the statement

with arguments.

Ans. Agriculture boost industrial sector by providing raw materials to agro-based industries.

- It depends on industries for irrigations pumps, machines and tools thus providing industries to set up production units.
- Agriculture allows industries to make production process efficient.

9. Why has the 'Chotanagpur Plateau Region' the maximum concentration of iron and steel industries? Analyse the reasons

**Answer:**

The Chotanagpur region has the maximum concentration of Iron and Steel industry due to various locational advantages.

- Iron and Steel industry requires, coal, limestone and manganese which are available in close proximity to the region.
- Availability of cheap labour from adjoining states of Bihar, West Bengal and Odisha.
- The region is well connected with good network of roads and railways.
- Nearness to huge market for iron and steel goods.
- Nearness to the port of Kolkata provides market, financial services, consultancy services, insurance and export of iron and steel goods.
- The rivers provide the cheapest inland water transport for iron and steel goods. (any three)

Hence there is maximum concentration of iron and steel plants like Jamshedpur, Durgapur, Burnpur, Bokaro and Rourkela in the Chotanagpur region.

10. Describe three major problems faced by the weaving and processing sectors in cotton textile industry.

Ans. The three major problems faced by the weaving and processing

sectors in cotton textile industry are:

- Most of the production is carried out in fragmented small units.
  - Power supply is erratic in nature.
  - Machinery used by the weavers is outdated.
  - The labour has low productivity.
  - Textile industry faces stiff competition from synthetic fibre industry.
  - Much of the high quality yarn is not used by our weavers as it is exported.
- Long Answer Type Questions [5 Marks]**

1. "The economic strength of the country is measured by the development of manufacturing industries". Support the statement with arguments.

**Answer:**

**The economic strength of a country is measured by the development of manufacturing industries.**

- Industries create a variety of goods and thus reduce the dependence of people on agriculture and contributes to modernisation of agriculture.
- Industrial development helps to reduce unemployment and poverty levels by initiating income and high standard of living.
- Export of manufactured goods add value to the economy. It expands trade and commerce and brings to foreign exchange.
- Industries utilise primary materials and convert them into articles of utility, thus adding value to the raw materials.
- Countries that transform their raw material into a wide variety of furnished goods of higher value are prosperous. India's prosperity lies in diversifying its manufacturing industries

2. Why are sugar mills concentrated in sugarcane producing areas?

Explain any

three problems faced by sugar industry in India.

**Answer:**

The sugar industries are concentrated in the sugar producing areas

because the raw materials (sugarcane) used by this industry is bulky. To reduce the cost of transporting sugarcane to sugar industries, they are concentrated in sugarcane producing areas.

**The three problems faced by the sugar industry in India are:**

- Old and inefficient methods of production
- Delay in transporting sugarcane to the factories
- The need to make maximum use of baggase.
- Above all seasonal nature of the industry is also a major issue

3.Explain any five factors affecting the location of an industry.

**Answer:**

The following factors affect the location of an industry:

- **Availability of raw materials:** Close proximity to raw material, regular supply at cheap cost are of utmost significance, e.g., concentration of heavy industries in Chattisgarh.
- **Labour:** Modern industry requires both skilled and unskilled labour at low cost. It also determines the location of industry, e.g., cotton textile industry in Maharashtra.
- **Capital:** Industries are capital intensive. Banks and other financial institutions, insurance etc. play an important role in setting up production units.
- **Power:** All production units depend on one or other sources of power like coal, oil, gas etc. Regular and cheap supply of power is required to keep industries operational, e.g., iron and steel industries near Raniganj and Jharia coal fields.
- **Market:** Goods manufactured need to be sold in the market to maintain the demand and supply.

4.What is the manufacturing sector? Why is it considered the backbone of development? Interpret the reason.

**Answer:**

Manufacturing sector refers to the secondary sector of the economy which deals with production of goods in large quantities with the help of machines, where raw materials are transformed into more valuable products. Manufacturing is considered as the backbone of economic development because:

- Manufacturing has contributed to modernisation of agriculture and reduced the dependency on agriculture by providing jobs in secondary and tertiary sectors.
- It has helped in reducing the poverty and unemployment and aimed at reducing the regional disparities by setting up of industries in rural, backward and tribal areas.
- Export of industrial goods contributed to valuable foreign exchange earnings.
- It has added value to raw materials by converting them into finished goods.
- The prosperity of a nation depends upon the development and diversification of manufacturing. Thus, it has not only made India self-sufficient but more competitive in terms of international market.
- It brings down regional disparities by establishing industries in tribal and backward areas.
- Industrial sector contributes substantially to GDP.

5. Why was the cotton textile industry concentrated in the cotton growing belt in the early years? Explain.

**Answer:**

The cotton textile industry was mainly concentrated in the cotton growing areas because of the following reasons:

- Abundant availability of raw cotton due to favourable climate and presence of black soil.
- Huge market for cotton textile in and around Mumbai.

- Well-developed means of transport including the port facilities in Mumbai.
- Cheap labour from the adjoining areas.
- Mild and moist climate is favourable for spinning the cotton yarn.

6.Explain the pro-active approach adopted by the National Thermal Power Corporation (NTPC) for preserving the natural environment and resources

Ans.NTPC has a pro-active approach for preserving the natural environment and resources like water, oil and gas in places where it is setting up power plants. The approaches are as follows:

- Optimum utilisation of equipment by adopting latest techniques and upgradation of existing equipment.
- Minimising waste generation by maximising ash utilisation.
- Providing green belts for nurturing ecological balance.
- Reducing environmental pollution through ash pond management, ash water recycling system and liquid waste management.
- Ecological monitoring, reviews and on-line database management for all its power stations.

7.What is manufacturing sector? Describe the four types of manufacturing sectors on the basis of ownership.

Ans.Manufacturing sector refers to the secondary sector of the economy deals with production of goods in large quantities with the help of machine, which converts the raw materials into valuable products. On the basis of ownership, manufacturing is classified into four types:

- Public sector: Public sector industries are owned and run by government agencies like BHEL, SAIL etc.
- Private sector: Private sector industries are owned and run by individuals or a group of individuals. Example: TISCO, Bajaj Auto

Ltd.

- Joint sector: Joint sector industries are jointly run by the state and individuals or a group of individuals. Example: OIL (Oil India Limited) is jointly owned by private and public sector.
- Cooperative sector: Cooperative sector industries are owned and run by the producers or suppliers of raw materials, workers or both or cooperative societies who pool their resources. They share the profit or loss proportionately, for example, sugar mills, coir industry and handloom textiles.

8. Describe any five factors responsible for the concentration of jute mills along the banks of the Hugli river.

**Answer:**

The five factors responsible for the location of jute mills along the Hugli basin are:

- Proximity or nearness to the jute producing areas.
- Inexpensive water transport.
- Good network of roadways, railways and waterways which helps in the movement of raw material to the mills.
- Availability of abundant water for processing of raw jute.
- Cheap labour from West Bengal, Bihar, Odisha and Uttar Pradesh.
- Kolkata being a large urban centre provides banking, insurance and port facilities for export of jute goods.

9. Describe any five factors responsible for the concentration of iron and steel industry in and around Chotanagpur Plateau region.

Ans. Chotanagpur region is the hub of many iron and steel plants because:

- Iron and steel industry requires iron ore, coal, limestone and manganese which are available in close proximity.
- Good network of roads and railway facilitates the movement of raw



Now observe a completely shocked bird



**Dr.Rachana Nair**  
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