EAST POINT SCHOOL

CLASS X

ONLINE ASSIGNMENT 19

ENGLISH

MAKING OF A SCIENTIST

By **Robert W. Peterson**

About the Author

Robert W. Peterson (1925 Warren, Pennsylvania –February 11, 2006) was an American newspaper writer who later became a freelance author of magazine articles and books, especially on the topics of sports and scouting. His 1970 chronicle of Negro league baseball titled 'Only the Ball Was White' was hailed by The New York Times as having "recaptured a lost era in baseball history and a rich facet of black life in America". The baseball commissioner at the time, Bowie Kuhn, later credited Peterson's book with having "focused greater attention on the accomplishments of Negro League players", leading to their admission to the Baseball Hall of Fame.

Introduction to the lesson

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 Making of a Scientist' is a story about the leading scientist Richard Ebright.

- He was a curious child right from the beginning years of his life. He had started collecting butterflies in his childhood and by the time he is in second grade, he had already gathered all the 25 species found in his hometown. Also, he collected coins, fossils, and rocks.

- One day his mother gave him a book named 'The Travel of Monarch X'. This book has been a turning point in life and introduced him to the world of science.

- He experienced the real science in country science fair and moreover he understood that to win something he needs to do something extraordinary.

- Later, for his eighth grade, he selected the assignment of finding the cause of viral sickness that killed almost all the monarch caterpillars every year. He thought that the cause for this could be a beetle, so, he rose caterpillars with the presence of beetles. However, he was wrong. Next year his project for the science fair was testing the theory that viceroy butterflies copy monarchs. His project got the first price in zoology division and third in country science fair.

- In his second year of high school, Richard Ebright research led to his discovery of an unknown insect hormone which led to his new theory on the lives of cells. He tried to find the purpose of tiny golden spots on the back of monarch pupa. This project won first place in a country science fair and a chance to work in Walter Reed Army Institute of research.

- As a high school student, he continued his advanced experiment and finally was able to identify hormones chemical structure. One day while looking at the Xray photos of the hormone he got the idea of his new theory that tells cells can read the blueprint of its DNA. Ebright and his roommate constructed the plastic model of a molecule to illustrate the working of DNA. It was a big leap forward and got published in a magazine. He graduated from Harvard with the highest honours.

- He has other interest also like public speaking, debate and is also a canoeist and an outdoor person. Also, he was competitive but in good sense and always want to do his best. Moreover, he possesses all the traits of becoming a good scientist.

About Characters:

- **Richard H Ebright:** He is a brilliant scientist. He is noted for' his work on cell and reading of **DNA. Richard's Mother** She is an encouraging mother who supported Richard in every way.
- **Dr. Frederick A. Urquhart:** He is a prominent scientist. He did his research on monarch butterflies. He provided valuable guidance to Richard for his projects.
- **Richard A. Weiherer:** He is Richard's social studies teacher. He helped Richard become a good debater and a public speaker.
- **James R. Wong:** He.is a fellow scholar who worked with him on a project.

Short Answer Type Questions

Q1) How did a book become a turning point in Richard Ebright's life?

Ans) After Richard had collected all the 25 species of butterflies that were found in his surroundings, he thought that it would be an end to butterfly collection when his mom bought

him a book named ‘Travels of Monarch X’ which told him about how butterflies migrated to Central America. This book aroused an interest in him for exploring more of what was to come and started studying more about monarch butterflies.

Q2) How did his mother help him?

Ans) His mother played a turning role in the life of the scientist as she used to buy him telescopes, microscopes, cameras, mounting equipment and used to try to help him by getting him things to learn in the evening when he used to be free. She also used to take him out on field trips and the book Travels of Monarch X was also bought by her. So we can say that the mother played a very important role in the making of what he was.

Q3) What lesson does Ebright learn when he does not win anything at a science fair?

Ans) He learnt that just by showing neat and clean simple slides won't make him win anything but the actual experiment that he will perform will help him win the prize at any fair.

Q4) What experiments and projects does he then undertake?

Ans) He did an experiment to see the cause of the viral disease that kills nearly all the monarchs after a few years and also took up a project to prove that the viceroy butterflies copy monarchs to survive by behaving like them.

Q5) What are the qualities that go into the making of a scientist?

Ans) According to the chapter, there are three qualities that a person needs to have to be a scientist. Firstly, a first - rated mind, secondly, curiosity and thirdly, the will to win for the right reasons.

Long Answer type Questions

Q.1 Richard’s mother had a great influence on him. Discuss.

Or

Discuss the role of Ebright’s mother in making him a scientist. **[CBSE 2011]**

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 Dr Urquhart to guide her son. The scientist helped Richard and guided him. Thus, his mother actually shaped him into an extraordinary scientist.

Q.2 Ebright's study of monarch pupas had a far reaching impact. Elaborate.

Ans.For a long time the scientific community had regarded the bright spots on a monarch pupa as purely ornamental. But Dr Urquhart did not believe it. Nor did Richard. He started his experiments on the monarch pupa. He built a device with the help of a friend. This led to the discovery of a hormone. Richard proved that the hormone was necessary for the growth of the butterfly. This discovery got him many honours. Also, it led to another important study. He began working on how cells read their DNA. DNA is the carrier of heredity and is called the blueprint of life. His theory could find answers to many cancers and diseases.

Q.3 Richard Ebright displayed a well-rounded personality. Do you agree? Elucidate in the context of the given text. **[CBSE 2016]**

Ans. Richard's genius was obvious by the time he was in his second grade. He managed to collect all twenty-five . species of butterflies around his hometown and classify them. He also loved to collect coins, fossils and rocks. Science was not his only passion. He was an active member of his school's oratory club and model United Nations club and was an effective debater and a public speaker. He loved photography as well.
He was an enthusiastic canoeist and an all-around outdoors person. Learning was easy for him. So he found it simple to devote time and energy to many other interests. He became a champion in whatever he did. He believed in the spirit of competition to win. But, he did not wish to defeat others just to win. He wanted to win to do his best. Thus, he displayed a well-tounded personality.

Q.4 Dr Urquhart contributed significantly to Ebright's growth as a scientist. Explain
Ans. Richard had become bored with collecting butterflies. His mother got him a book on the migration of butterflies. Richard came in contact with Dr Urquhart through the book. Dr Urquhart directed him to study the migration pattern of butterflies.
When he did not win any prize in the science fair in seventh grade, he again wrote to Dr Urquhart to guide him. The scientist gave him many suggestions for new experiments. Richard performed these experiments throughout his high school and won many prizes. Later, he worked on why bright spots are found on a monarch pupa, motivated by Dr Urquhart. It led to the discovery of a new hormone. The discovery of this new hormone further led to an important theory. The theory was about how cells read their DNA. In this way Dr Urquhart proved to be his true mentor.

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Q.5 What are the values required to become a successful scientist like Richard Ebright? Elaborate with reference to the lesson 'The Making of a Scientist'.
Ans. Curiosity to know more and a motivation to find reasons for existence of anything or any phenomena are necessary for becoming a successful scientist. The urge to know more develops the scientific aptitude in a person. At a very young age, Ebright became competitive by

participating in various county fairs. He never lost hope and kept on trying to do better. In addition to curiosity and motivation, Ebright displayed the qualities of hard work, sincerity, determination and patience. He also accepted failure and success in the right spirit. Thus, he became a successful scientist.

VIDEO LINK: https://youtu.be/96-VACHSldY

HISOTRY

Question 1.
What type of conservative regimes were set up in 1815 in Europe?
(a) Autocratic
(b) Democratic
(c) Aristocratic
(d) Dictatorial

Question 2.
Identify the French artist who prepared a series of four prints visualising his dream of a world from the following:
(a) Kitagewa Utamaro
(b) Richard M Hoe
(c) Voltaire
(d) Frederic Sorrieu

Question 3.
Napoleon invaded Italy in
(a) 1821
(b) 1790s
(c) 1905
(d) 1797

Question 4.
Who was proclaimed King of united Italy in 1861?
(a) Victor Emmanuel II
(b) Louis Philippe
(c) Mazzini
(d) Cavour

Question 5.
Which of the following artists painted the image of Germania?
(a) Philip Veit
(b) Frederic Sorrieu
(c) Ernst Renan
(d) Richar M Hoe

Question 6.
Who said ‘When France sneezes, the rest of Europe catches cold’?
(a) Garibaldi
(b) Bismarck

(c) Mazzini
(d) Duke Metternich

Question 7.
What happened to Poland at the end of 18th century. Which of the following answers is correct?
(a) Poland achieved independence at the end of the 18th century.

(b) Poland came totally under the control of Russia and became part of Russia.
(c) Poland became the part of East Germany.
(d) Poland was partitioned at the end of the 18th century by three Great Powers: Russia, Prussia and Austria.

Question 8.
Who played the leading role in the unification of Germany?
(a) German Emperor (formerly King of Prussia) – Kaiser William I.
(b) Otto Von Bismarck (Prussian Chief Minister).
(c) Johann Gottfried Herder – German philosopher.
(d) Austrian Chancellor – Duke Metternich.

Question 9.
Three wars over seven years with Austria, Denmark, Germany and France, ended in
(a) Danish victory
(b) Prussian victory
(c) French victory
(d) German victory

Question 10.
Who was proclaimed the emperor of Germany in 1871?
(a) Otto Von Bismarck
(b) Victor Emmanuel II
(c) Count Cavour
(d) Kaiser William I of Prussia

Question 11.
Which one of the following was not the feature of Napoleonic Code?
(a) Equality before the law
(b) Universal Adult Franchise
(c) Right to Property
(d) Privileges based on birth

Question 12.
Who hosted the ‘Treaty of Vienna’?
(a) Frédéric Sorrieu
(b) Victor Emmanuel
(c) Duke Metternich
(d) Giuseppe Garibaldi

Question 13.
The political and constitutional changes brought about by the French Revolution were:
(a) it ended the absolute monarchy.
(b) It transferred power to a body of the French citizens.
(c) It proclaimed that henceforth people would constitute the nation and shape its destiny.
(d) All the above.

Question 14.
What does ‘Absolutist’ mean?
(a) A Philosophy
(b) A Theory
(c) Monarchical Government
(d) A Painting

Question 15.
The first clear expression of nationalism came with:
(a) The American Revolution
(b) The French Revolution

(c) The Russian Revolution
(d) The Industrial Revolution

Question 16.
What does a blindfolded woman carrying a pair of weighing scales symbolise ?
(a) Peace
(b) Equality
(c) Justice
(d) Liberty

Question 17.
What was the main intention behind ‘Treaty of Vienna of 1815’?
(a) Restore republics
(b) Restore democracies
(c) Restore monarchies
(d) None of these

Question 18.
Who was proclaimed German Emperor after its unification?
(a) The Prussian King – William-I
(b) The French King – Louis Philippe
(c) Victor Emmanuel II
(d) None of these

Question 19.
What did Germania symbolize?
(a) French nation
(b) German nation
(c) British nation
(d) None of the above

Question 20.
Who was Giuseppe Mazzini?
(a) French Revolutionary
(b) Italian Revolutionary
(c) Russian Revolutionary
(d) None of above

Question 21.
Name the customs union formed by Prussia to abolish tariff barriers.

(a) Elle
(b) Zollverein
(c) Zweibiicken
(d) La Patrie

Question 22. What did ‘Das Volk’ stand for?
(a) Democracy
(b) Factory workers
(c) Slum dwellers
(d) Common people

Question 23.
Which of the following is true with reference to Romanticism?
(a) Concept of government by consent
(b) Freedom of markets
(c) Cultural movements
(d) Freedom of an individual

Question 24.
Who were the Junkers?
(a) Soldiers
(b) Large landowners
(c) Aristocracy
(d) Nobility

Question 25.
Which one of the following areas was the most serious source of nationalist tension in Europe after 1871?
(a) The Balkans
(b) Great Britain
(c) Italy
(d) Germany

Match the following:

Column A	Column B

Attribute	Significance
1. Broken chains	a. heroism
2. Breastplate with eagle	b. beginning of a new era
3. Crown of oak leaves	c. being freed
4. Sword	d. willingness to make peace
5. Olive branch around the sword	e. symbol of the German empire-strength

(i) Identify the above figure.
(ii) Name the artist who painted the image.
(iii) What is the significance of the image?

VIDEO LINK: https://www.youtube.com/watch?v=I0EW1v7BJZ4

POLITICAL SCIENCE

Q1 How democracy helps in accomodating social diversity?

Q2 " Democracy helps in enhancing dignity and freedom of individuals".Justify.

Q3 "People are complaining is itself a testimony to the success of democracy".Give reasons to support your answer.

Q4 Define transparency.

Q5 Do you think democracies are successful in reducing inequality and poverty ? Give reasons to support your answer.
VIDEO LINK: https://www.youtube.com/watch?v=j_MNEX9pKMg&authuser=0

Geography

Chapter 6 : Manufacturing industries

Industrial Pollution and Environmental Degradation

a) Air pollution is caused by the emission of CO2, Carbon Monoxide, Sulphur Dioxide etc. Chimneys of the industries produce heat leading to Global Warming and Green House Effect. Use of CFC in various industrial products depletes ozone layer which filters ultraviolet rays of the sun

. b) Dumping of organic and inorganic industrial waste into water bodies pollute the water. Industries which produce paper, pulp, chemical, leather, acids, dyes, fertilizers etc generate lots of toxic waste which kills the aquatic life

. c) High intensity sound generated by running machines, siren, drilling, fans etc leads to noise pollution. It causes irritation, hearing impairment, heart attack etc. among the nearby people.

d) Mining activity to get raw material for industries also degrade the environment. Land degradation, deforestation, soil erosion, water logging etc. of result of mining activities.

Measurement [Methods] for Controlling Environmental Pollution and Degradation

a) Industries should be located with careful planning and better design.

b) Quantity of smoke can be reduced by using oil instead of coal.

c) Non-conventional sources of energy should be used instead of fossil fuels.

d) Modern equipment should be used which controls, filters and separate harmful materials from the waste

. e) Waste water should be properly treated before discharging into rivers.

f) Land filling method should be adopted for dumping of waste.

g) Polluting industries should be located away from town and cities.

MCQ

1. .Which one of the following has been major source of foreign exchange for IT industry?

a. . Bharat Heavy Electricals limited

b . Oil India Limited

c. Steel Authority of India Limited

2. Which one of the following is not true regarding the National Jute Policy

a. creating awareness about the use of biodegradable materials

b. ensuring good prices to the jute farmers

c. increasing productivity

d. improving quality of jute

3. What is percapita consumption of steel per annum in India

a. 28 kg

b. 30 kg

c. 32 kg

d. 34 kg

4. Which one of the following countries has the largest installed capacity of spindles in the world

a. India

b. China

c. USA

d. Britain

5. Which of the following industries has been a major foreign exchange earner in the last few years

a. electronic industry

b. IT industrt

c. Engineering industrt

d. Tourism industrt

6. In which state is the Bhilai steel plant located

a. Bihar

b. Jharkhand

c. Chhattisgarh

d. Uttarakhand

7. The economic strength of a country is measured by the development of which of the following

a. agriculture

b. infrastructural facilities

c. capital

d. enterprise

8. Which of the following developments usually follows industrial activity

a. agriculture

b. urbanization

c. electrification

d. mining

9. Which of the following public sector steel plant is located near port

a. Durgapur

b. vijaynagar

c. Vishakhapatnam

d. bhadravati

10. Which of the following is not an inorganic chemical

a. sulphuric acid

b. petrochemicals

c. nitric acid

d. alkalies

SHORT ANSWER TYPE QUESTIONS

1. Mention any two factors that have contributed to a healthy growth of the automobile industry in India/ Name two centres where this industry is located.
2. Explain how do pollute the fresh water resources. suggest any two ways to control water pollution.
3. 'Environmental degradation has been seen everywhere'. Explain any three values that can help to prevent environment degradation.
4. Explain the causes of water pollution.
5. Examine the impact of liberalization on automobile industry of India.

LONG ANSWER TYPE QUESTIONS

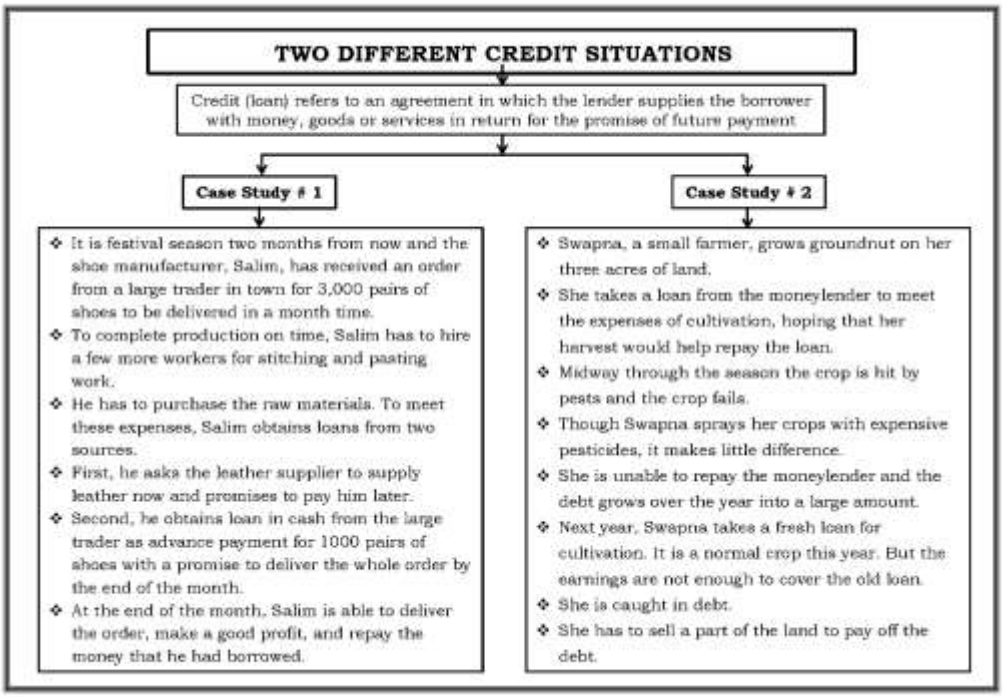
1. Explain the pro active approach adopted by the National Power Thermal Corporation(NTPC) for preserving the natural environment and resources.
2. Analyse the role of the chemical industries in Indian economy.

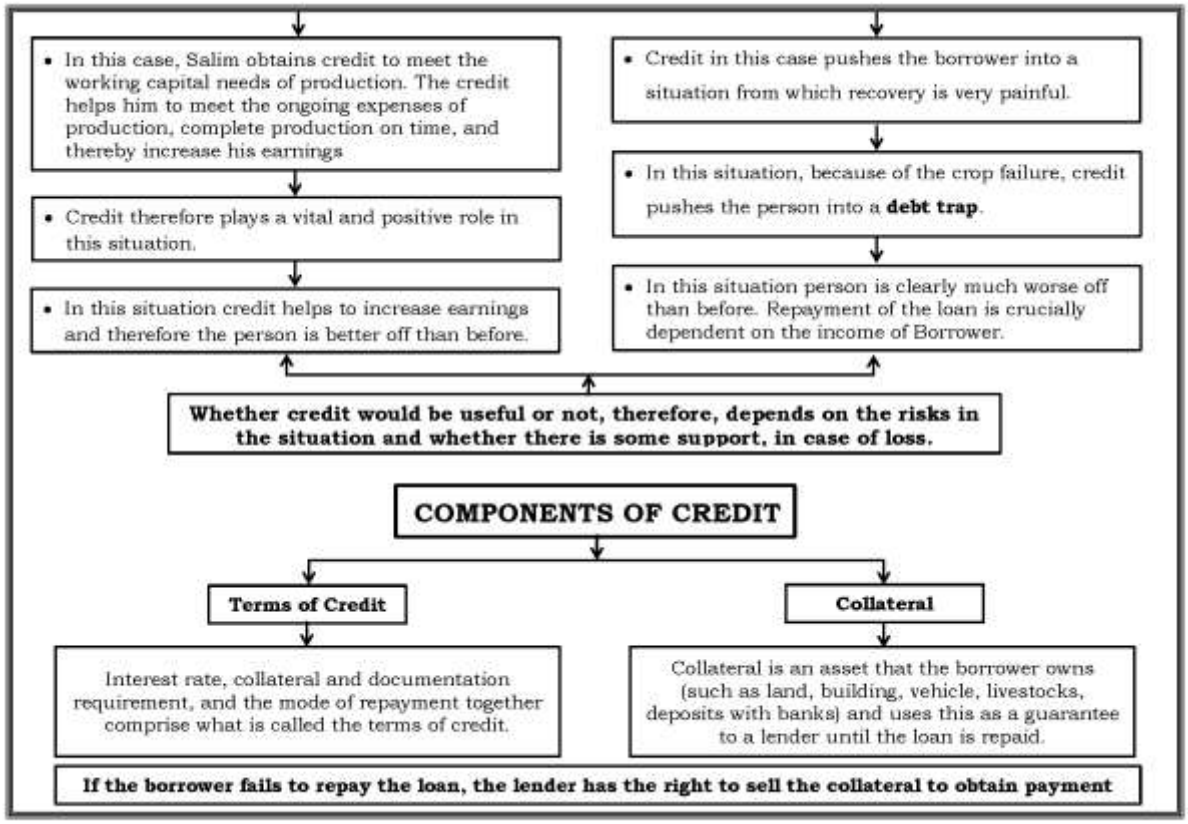
ACTIVITY: Locate and label the following Software Technology Parks on the political map of India.

- Noida
- Gandhinagar
- Mumbai
- Pune
- Hyderabad
- Bengaluru
- Chennai
- Thiruvananthapuram

VIDEO LINK;
https://youtu.be/KDDcfOP6LCw
https://www.youtube.com/watch?v=7A9JPkwXYxA&feature=youtu.be

ECONOMICS





1) Give any two examples of informal sector of credit. [Delhi 2018] (1)

2) Who supervises the functioning of formal sources of loan? [Foreign 2015] (1)

3) Prove with an argument that there is a great need to expand formal sources of credit in rural India. [OD 2016] (1)

4) Why are most of the poor households deprived from the formal sector of loans? [OD 2016] (1)

5) Why is the supervision of the functioning of formal sources of loans necessary? [2019, OD 2016] (1)

6) Why do farmers require credit? [2016] (1)

7) What should be done to reduce dependence on informal sources of credit in rural area? (1)

8) Explain the differences between Formal and Informal Sources of Credit. [2016, 2012] (5)

Or

Why are service conditions of formal sector loans better than informal sector? Explain. [2019] (3)

9) Which are the two major sources of formal sectors in India? Why do we need to expand the formal sources of credit? [2012, 2011] (5)

Or

Why is it necessary for banks and cooperatives to increase their lending in rural areas? Explain. [2019, 2015, 2012] (5)

Or

Why is it necessary to increase a large number of banks mainly in rural areas? Explain. [2019] (3)

10) "Most of the poor households are still dependent on informal sources of credit." Explain the statement. [Foreign 2016, 2012] (5)

11) "The credit activities of the informal sector should be discouraged." Support the statement with arguments. [Com. Delhi 2018, Delhi 2016] (3)

Or

Describe the bad effects of informal sources of credit on borrowers. [2019] (3)

12) "Cheap and affordable credit is crucial for the country's development." Explain the statement with five points. [Delhi 2018, 2011] (5)

Video Links

https://www.youtube.com/watch?v=oOr1ydFIA2Q
https://www.youtube.com/watch?v=eYnhFY0bLLU
https://www.youtube.com/watch?v=Ws5QpLEw1XU&t=307s
https://www.youtube.com/watch?v=yn-aDG4hTDE
https://www.youtube.com/watch?v=60SeHdW3Id0

CHEMISTRY

Carbon and its compound
Objective type questions

Multiple choice questions:

Q1. Which of the following statements are correct for carbon compounds?
(i) Most carbon compounds are good conductors of electricity.
(ii) Most carbon compounds are poor conductors of electricity.
(iii) Force of attraction between molecules of carbon compounds is not very strong.
(iv) Force of attraction between molecules of carbon compounds is very strong.
(a) (ii) and (iv)
(b) (ii) and (iii)
(c) (i) and (iv)
(d) (i) and (iii)

Q2. C_3H_8 belongs to the homologous series of
(a) Alkynes
(b) Alkenes

(c) Alkanes
(d) Cyclo alkanes

Q3. The number of isomers of pentane is
(a) 2
(b) 3
(c) 4
(d) 5

Q4. Why does carbon form compounds mainly by covalent bonding?
(a) There are four electrons in the outermost shell of carbon.
(b) It requires large amount of energy to form C^{4+} or C^{4-}
(c) It shares its valence electrons to complete its octet.
(d) All the above.

Q5. Which of the following belongs to homologous series of alkynes?
C_6H_6, C_2H_6, C_2H_4, C_3H_4.
(a) C_6H_6
(b) C_2H_4
(C) C_2H_6
(d) C_3H_4

Q6. A hydrocarbon has four carbon atoms. Give its molecular formula if it is an alkene.
(a) C_4H_{10}
(b) C_4H_8
(C) C_4H_6
(d) C_4H_4

Q 7. The first member of the alkyne homologous series is
(a) propyne
(b) ethyne
(c) methane
(d) ethene

Q 8. In diamond, each carbon atom is bonded to four other carbon atoms to form
(a) a hexagonal array
(b) a rigid three-dimensional structure

(c) a structure in the shape of a football
(d) a structure of a ring

9. Which of the following has a double bond?
(a)Hydrogen molecule
(b)Oxygen molecule
(c)Nitrogen molecule
(d)Methane molecule

Q10. Subsequent members of homologous series differ by how many gram atomic mass?
(a)14u
(b)20u
(c)44u
(d)180u

Fill in the Blanks
1. ……. is a versatile element that forms the basis for all living organisms and many of the things we use.
2. Covalent bonds are formed by the ……. of electrons between two atoms so that both can achieve a completely filled outermost shell.
3. The unsaturated hydrocarbons which contain one or more double bonds are called …….
4. The general formula of alkynes is ……. .
5. A group of organic compounds having similar structures and similar chemical properties in which the successive compounds differ by CH_2 group is called a ……. ..

I. ASSERTION AND REASONING BASED QUESTIONS:

In the following questions, the Assertion and Reason have been put forward. Read the statements carefully and choose correct alternative from the following :

a) Both assertion and Reason are correct and Reason is the correct explanation of the Assertion.
b) The Assertion and Reason are correct but Reason is not the correct explanation of the assertion.
c) Assertion is true but the Reason is false.
d) The statement of the Assertion is false but the Reason is true.

1. Assertion: Chemical bonds in organic compounds are covalent in nature.
   Reason: Covalent bond is formed by the sharing of electrons in the bonding atoms.

2. Assertion: Diamond is the hardest crystalline form of carbon.
   Reason: Carbon atoms in diamond are tetrahedral in nature.

3. Assertion: Due to catenation a large number of carbon compounds are formed.
   Reason: Carbon compounds show the property of allotropy.

4. Assertion: carbon compounds can form chain, branch and ring structures.

   Reason: carbon exhibits property of catenation.

5. Assertion : In a homologous series of alcohols, the formula for the second member is C_2H_5OH and third member is C_3H_7OH.
   Reason: the difference between the molecular masses of the two consecutive members of a homologous series is 144 u.

   VIDEO LINK: https://youtu.be/xbtPg5JrKW0

BIOLOGY

Heredity

Q1. Explain Mendel's experiments to describe inheritance of one gene with reference to height of pea plants.

Q2. **On crossing two similar hybrids, the percentage of recessive is**

A 50% **B** 75% **C** 25% **D** 100%.

Q3. **What will be the genetic constitution of the offspring of a cross of individuals heterozygous (Zz) for an allele?**

A. All ZZ B All zz C, ½ ZZ AND ½ zz D. ¼ ZZ 2/4 Zz ¼ zz

Q4. A dwarf pea plant in which bolting has occurred is crossed with a tall pure pea plant. What will be the phenotypic ratio in F1 generation?

A100% tall plants

B100% dwarf plants

C50% tall and 50% dwarf plants

D75% tall and 25% dwarf plants

Which statement explains the Mendel's law of segregation?

(a) A trait in an offspring is due to the combination of an allele each from both the parent.

(b) A trait in an offspring is due to the combination of two alleles each from both the parent.

(c) A trait in an offspring is due to the combination of two alleles each from either of the parent.

(d) A trait in an offspring is due to the combination of one allele each from either of the parent.

2) Two individuals are as shown using geometric shapes.

X^rY X^mX^m

Their sex chromosomes are respectively denoted by X, X-, and Y. What are the possible combinations of sex chromosomes for their male and female offspring respectively?

(a) XX- and X-X-

(b) X-Y and X-X-

(c) XY and X-Y

(d) X-Y and X-X

Q8. What is the cause of variation in asexually reproducing organisms?

Q9. When is a recessive trait able to show up?

Q10. How do Mendel 's experiments show that traits are inherited independently?.

VIDEO LINK: shiksha.com

PHYSICS

Link- https://youtu.be/GgRCkduKCLE

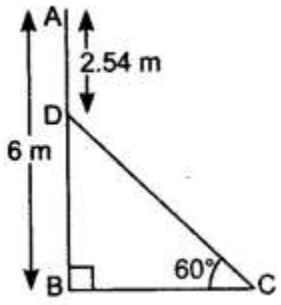
1. Name and state the rule to determine the direction of magnetic field produced around a current carrying conductor.
2. Two magnetic lines of force do not intersect each other. Why?
3. Draw the pattern of lines of force due to a magnetic field through and around a current carrying loop of wire. How does the strength of magnetic field produced at the centre of the loop be affected if:-
    a. strength of the current passing through it is doubled?
    b. the radius of the loop is reduced to half the original value?
    c. the radius of the loop is doubled its original value and at the same time current passing through it is also doubled?
4. What does the arrow of the magnetic field line indicate?

5. What does crowding of field lines at a point mean?
6. Will a circular loop of bigger radius produce higher magnetic field than a loop of smaller radius if current flowing though both the loops is same? Give reason.
7. What is a solenoid?
8. Draw comparison of magnetic field pattern due to current carrying solenoid and that of a bar magnet.
9. The field lines inside the solenoid are in the form of parallel straight lines. What does this indicate?
10. What is an electromagnet?

MATHEMATICS

Assignment on chapter APPLICATION OF TRIGONOMETRY

1. In Figure, AB is a 6 m high pole and CD is a ladder inclined at an angle of 60° to the horizontal and reaches up to a point D of pole. If AD = 2.54 m, find the length of the ladder.(use √3=1.73)



2. A ladder, leaning against a wall, makes an angle of 60° with the horizontal. If the foot of the ladder is 2.5 m away from the wall, find the length of the ladder.
3. The angles of depression of the top and bottom of a 50 m high building from the top of a tower are 45° and 60° respectively. Find the height of the tower and the horizontal distance between the tower and the building,
4. A man standing on the deck of a ship, which is 10 m above water level, observes the angle of elevation of the top of a hill as 60° and the angle of depression of the base of hill as 30°. Find the distance of the hill from the ship and the height of the hill.
5. Two men on either side of a 75 m high building and in line with base of building observe the angles of elevation of the top of the building as 30° and 60°. Find the distance between the two men
6. A 7 m long flagstaff is fixed on the top of a tower standing on the horizontal plane. From a point on the ground, the angles of elevation of the top and bottom of the flagstaff are 60° and 45° respectively. Find the height of the tower correct to one place of decimal
7. An aeroplane, when flying at a height of 4000 m from the ground passes vertically above another aeroplane at an instant when the angles of elevation of the two planes from the same point on the ground are 60° and 45° respectively. Find the vertical distance between the aeroplanes at that instant
8. A bird is sitting on the top of a 80 m high tree. From a point on the ground, the angle of elevation of the bird is 45°. The bird flies away horizontally in such a way that it remained

at a constant height from the ground. After 2 seconds, the angle of elevation of the bird from the same point is 30°. Find the speed of flying of the bird.

9. The angles of elevation of the top of a tower from two points at a distance of 4 m and 9 m from the base of the tower and in the same straight line with it are 60° and 30° respectively. Find the height of the tower.
10. The angle of elevation of the top Q of a vertical tower PQ from a point X on the ground is 60°. From a point Y, 40 m vertically above X, the angle of elevation of the top Q of tower is 45°. Find the height of the tower PQ and the distance PX

VIDEO LINK: https://youtu.be/cJ09cIce_tg

COMPUTER

ASSIGNMENT(IT)

Q1 Fill in the blanks:

1. A _____ is a set of data elements that is organized using a model of vertical columns and horizontal rows.
2. A _____ is a set of data values of a particular simple type, one for each row of the table.
3. A _____ represents a single, data item in a table.
4. _____ are used to identify which type of data we are going to store in the database.
5. A _____ is a unique value that identifies a row in a table.
6. Types of languages used for creating and manipulating the data in the Database are _____ & _____
7. A _____ is a standard for commands that define the different structures in a database.
8. A _____ is a language that enables users to access and manipulate data in a database.
9. A _____ is a part of DML involving information retrieval only. 5. A popular data manipulation language is _____.

Q2 Short Answer

Q 1. What is the file extension for databases created using OpenOffice.Org Base?

Q2. List any three file formats that can be managed using OpenOffice.Org Base?

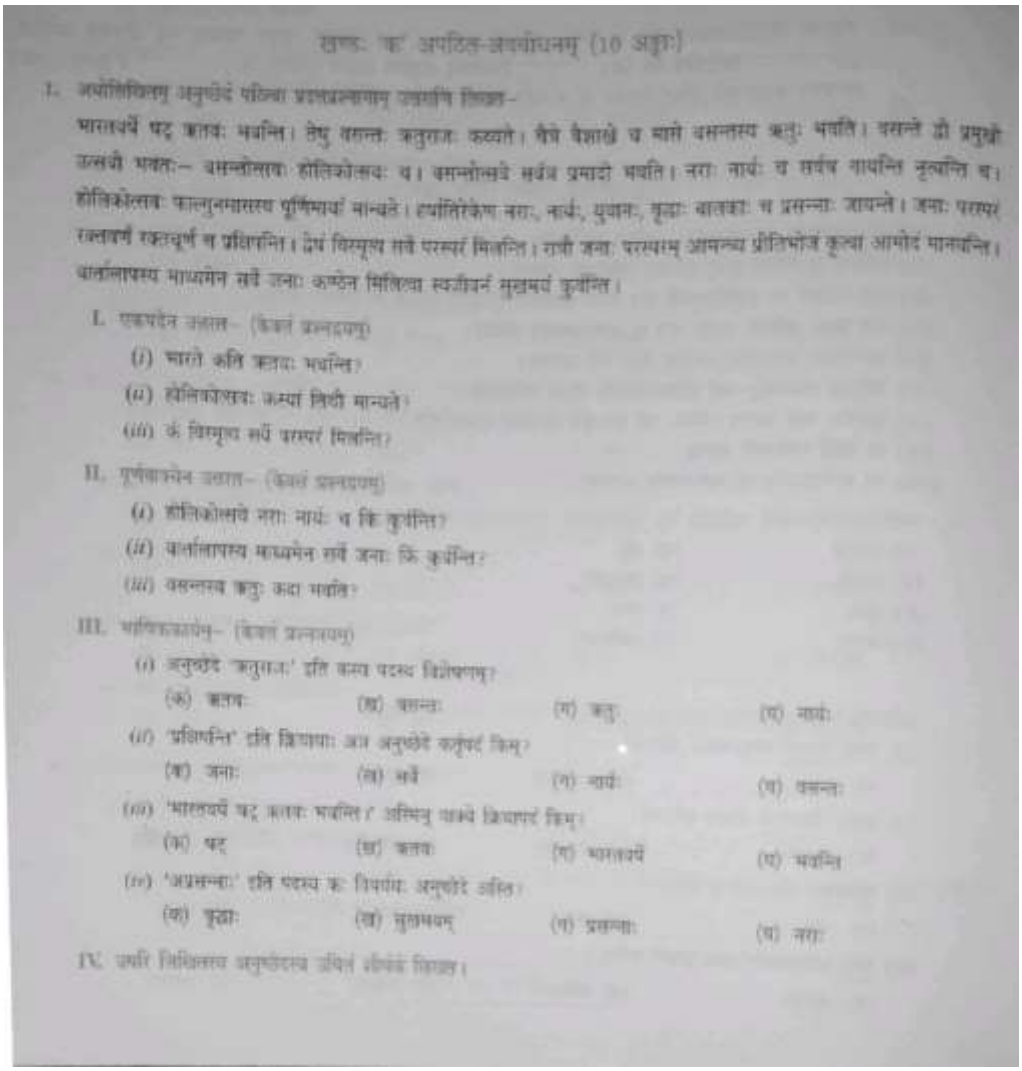
Q3 Create an Excel Workbook and write all the steps to done with following instructions.

a) Save this file with name Myexcelfile.

b) Rename sheet1 with another name: Example.

Move sheet2 to another excel workbook with name abc.xls.
d) Increase the Cell Row height=12.65 and width=9.36.
e) How to use merge and centre feature.
f) How to use sort and filter feature.
g) How to use conditional formatting? Give at least three names of conditional formatting. H) How to use auto sum feature?
i) How to freeze rows and columns?
j) How to hide and unhide rows and columns?
k) How to apply cell border?
l) How to define a name to a cell range in a worksheet?
m) How many types of chart available in ms excel and how to use it?
n) How to use cell values in another sheet?
o) How to share worksheet data?

SANSKRIT



VIDEO LINK: https://www.youtube.com/watch?v=CkqW9nPzCCU&authuser=0

HINDI

प्रश्न 1. लेखक के देखते-देखते वर्सावा में क्या-क्या बदलाव आए?

प्रश्न 2. मनुष्य के हस्तक्षेप से गुस्साए समुद्र ने अपना गुस्सा किस तरह प्रकट किया?

प्रश्न 3. पशु-पक्षियों के प्रति संवेदनशीलता में लेखक ने अपनी माँ और पत्नी के दृष्टिकोण में क्या अंतर अनुभव किया?

अथवा

लेखक की माँ और पत्नी के दृष्टिकोण में प्रकृति और पशु-पक्षियों के प्रति क्या अंतर दिखाई देता है, अपने शब्दों में लिखिए।

प्रश्न 4. 'अब कहाँ दूसरे के दुख से दुखी होने वाले' पाठ का प्रतिपाद्य अपने शब्दों में लिखिए।

VIDEO LINK: https://youtu.be/0rdukRWpy8g