

# ENGLISH ASSIGNMENT

## WRITING, LITERATURE & NOVEL

### WRITING:

1. Nowadays you find that more and more people carry mobile phones to their work place. However, the use of mobile phones can be dangerous at times. Write an article for your school magazine on the topic: **“ To use the latest technology the right way” discouraging the misuse of technological products like cell phones and highlighting the need to use them intelligently.**
2. **Read the notes given below and write an article on “ Importance of Games” (100-200words)**

**Notes: Games – integral activity – develop a child fully – no games -dullness of child's mind- healthy body – healthy mind – games important – mere studies – exhaustion – mind and body - games divert – and active mind.**

3. Snill's diary has the following notes. Based on these notes and with your own ideas, write an article on ' Child Labour- A Real Abuse to Humanity' in 100- 120 words.

**NOTES:** Weak, semi-clad children working in roadside dhabas – nickle – plating factories-small girls working in brick kilns- in fields- a sore scene to eyes- they should have been in schools-poverty, large families- childhood snatched -legal side ignored by mafia – bonded labour- children need to be liberated from this inhumane labour.

4. Write an article on environmental challenges that the world is facing in about 120-150 words. Imagine yourself to be Vandana/ Rohit. You may include the following points:

- Air, water and soil pollution
- Global Warming
- Increasing temperature
- Smoke from vehicles, factories, burning of fossil fuels etc.
- Hazardous impact
- Remedial action required
- Spreading Awareness

5. Complete the following story with a suitable title in about 150-200 words.

**'One day, in a heavily crowded place, a young man was shouting at the crowd. “People look at me; I have the most beautiful heart in the world....”**

6. Complete the following story in about 150-200 – words:

**One dark, cloudy and frightful night, I was suddenly awakened by a dazzling light. Still not completely shaken out of my slumber, I saw, from the window of my room...**

7. It is the night before you are to get your marked answer sheets. Write a short diary entry to

**\* express your state of mind- whether you are worried about anything or you are confident that you have done well**

**\* make a guess about the grade or marks you will get**

**\* give a reason in support of your estimate**

8. Complete the following story with a suitable title in about 150-200 words:

**Kim and Ray were very close companions. They were neighbours, studied together, completed their graduation and worked together. They planned to enjoy a vacation and took a sea voyage to explore different places. Unfortunately, their ship wrecked...'**

**(LITERATURE TEXTBOOK& LONG READING TEXT)**

9. Answer the following questions in 30-40 words each:

(i) What did the Professor mean by intelligent reading?

(ii) What lessons can you learn from Private Quelch's life as described in the story?

(iii) If you were Private Quelch, what mistakes would you have avoided to ensure that you earned commission in the Army?

(iv) How did Percy dissuade Mr Bramble from taking part in the boxing contest?

v. “ The scales have fallen from his eyes” What did Percy want to convey about Bill?

vi. Justify the title “ Keeping It From Harold.”

(vii ) What personal qualities and values of Harold made his parents so proud of him? Introspect yourself and mention a few of your qualities that can make your friends feel proud of you?

(viii) How was John Pescud's marriage different from real life marriages?

(ix) Why was Pescud astonished to see Jessie's home from outside? Which three major buildings did he compare it with? Why

(x) With reference to the poem, how can you look after your teeth?

(xi) Why does the poet call rain as earthly life?

10. “ Arrogance weaves one's fall.” Keeping in view the above statement and plight of Professor due to his excessive pride in his knowledge, write a paragraph in about 80-100 words. What values would you focus on by showing the fall of Professor?

11. Was John A Pescud a hypocrite? He pretends to have moral standards, opinion he never practices in life. Justify your answer by giving examples.

12. **Imagine you are Bill Bramble. You lead a tense life, hiding the truth of your profession from Harold, but when he came to know the truth, he was hurt and at the same time happy. Write your feelings in the form of a diary. (80-100 words)**
13. **You are the Bishop. You've given away your silver candlesticks to the convict. You had a deep attachment to them and you know that your sister Persome is going to be extremely upset when she knows the truth in the morning. Yet you feel a deep sense of satisfaction. Make a diary entry expressing your feelings. (80-100 words)**
14. **What was fishy about the story of a trout in a glass case in a village side inn, the author and one of his friends went to?**
15. **What opinion do you form of the Jerome's character from your reading of the novel- "Three men in a boat"**

ASSIGNMENT-1 (POST -MID TERM)  
SUB: S.SCIENCE

GEOGRAPHY:L-4: Climate ECONOMICS: L-3:Poverty as a challenge

Questions carrying 3 marks

1. Differentiate between climate and weather
2. How does the latitude affect India's climate?
3. How does altitude affect the climate of India?
4. What is 'coriolis force'? Describe briefly its effect on the world climate.
5. What are western cyclonic disturbances? Describe its impact on Indian climate.
6. Give a brief note on the Inter Tropical Convergence Zone.
7. "Temperature and Precipitation in India varies from one place to another place within India." Justify the statements with examples.
8. Differentiate between Sub-tropical Westerly Jet Streams and tropical Easterly Jet Streams.
9. Differentiate between South West Monsoon and North East Monsoon.
10. How is monsoon known for its uncertainties?
11. What are the dimensions of poverty?
12. What are the social indicators of poverty?
13. Which states report a significant decline in poverty? How?
14. What are the major reasons for the less effectiveness of poverty alleviation programmes.
15. How is poverty reduction expected to be better?
16. Which groups are most vulnerable to poverty?
17. What is the current anti-poverty strategy of the government for the promotion of economic growth?

Questions carrying 5 marks

18. Describe six major factors that control the climate of the world.
19. Describe the factors that affect the climate of India.
20. State the factors that influence the mechanism of monsoon.
21. Distinguish between the Onset of monsoon and Withdrawal of Monsoon.
22. State the chief characteristics of Cold Weather Season in India.

23. State the chief characteristics of Hot weather season in India.
24. What do you understand by the phenomenon of 'breaks in the rainfall'?
25. Give an account of the condition and characteristics of the Retreating monsoon.
26. "The distribution of rainfall in India is uneven and uncertain". Justify the statement with examples.
27. Write main characteristic features of Rainy season in India.
28. Describe briefly how is poverty line determined?

**L-6:PEASANTS & FARMERS L-2:RUSSIAN REVOLUTION**  
**ASSIGNMENT-2**

**Question carrying 3 /5marks**

1. What did the common land mean to the English countryside peasant?
2. What were the reasons for starting the Enclosure Movement in England in 16<sup>th</sup> and 18<sup>th</sup> C?
3. How increase in food production was made possible in England in 18<sup>th</sup> and 19<sup>th</sup> C?
4. What was the impact of Enclosure Movement on poor people in England ?
5. Critically examine the impact of mechanization of farming in England in 19<sup>th</sup> C.
6. Describe briefly the impact of Modern farming in England in 19<sup>th</sup> C.
7. Why did the White Americans turn the grasslands into bread basket of America ?
8. What happened to poor farmers in America after the use of new technology ?
9. What were the causes of the formation from Bread Basket to Dust Bowl in America ?
10. What was the impact of Black Blizzard in America ?
11. Describe the westward expansion of agriculture in America during 19<sup>th</sup> C
12. Why were the Indian farmers reluctant to produce opium in their farm?
13. How were the unwilling farmers made to cultivate opium?
14. How was the great Agrarian Depression set?
15. What were the three demands of Lenin's April Thesis ?
16. What were the main demands of Russian workers ?
17. What was the impact of I World War on Russia?
18. What was the main results of February Revolution in 1917 in Russia ?
19. Describe the impact of October Revolution on Russia .
20. Why did the British increase the land for cultivation in India ?
21. What role was played by the mechanical reaper in the harvest ?
22. What are the peculiarities of Test Cricket?
23. Describe the ideas of liberals , conservatives and radicals
24. In what two ways the Russian peasants were differ from other European peasants?
25. When did Socialist Revolutionary Party establish in Russia? What was its main purpose ?
26. Who were Mensheviks and Bolsheviks ?
27. Describe the 1905 Revolution in Russia.
28. Write a short note on " Bloody Sunday"
29. Who constituted the Union of Union ?What were their main demand?
30. Give an account on February Revolution in Petrograd.
31. Describe the impact of October Revolution on Russia

32. State the major provisions of Lenin's New Economic Policy.
33. Write a short note on Stalin's Policy of Collectivisation.
34. Describe the major impact of Russian Revolution on world.

**Lesson -5: Natural Vegetation Lesson -4 : Food Security in India Lesson-6 :Population**

**ASSIGNMENT-3**

**Questions carrying 3/5 marks**

1. Describe the relief factors that affect the flora and fauna in India?
2. Describe how climatic factors that influence the vegetation cover of India.
3. Distinguish between Moist Deciduous and Dry Deciduous forests.
4. What is the importance of various species in the ecosystem ?
5. State the main causes which are a threat to the ecosystem.
6. "India is one of the twelve mega biodiversity countries of the world ".Justify the statement.
7. What is ecosystem ? How do human beings influence the ecology of a region?
8. Why do we need food security?
9. How is food security affected during calamity?
10. Who are the most food insecure people in India ?
11. How PDS dealers resort to malpractices?
12. How does calamity affect the food security?
13. Distinguish between Seasonal Hunger and Chronic Hunger.
14. What are the three food intervention Programmes introduced by Govt of India ?
15. How migration plays a significant role in changing the composition and distribution of population ?
16. What is the relation between Occupational structure and development?
17. What is the difference between Population Growth and Population Change ?

**Questions carrying 5 marks.**

18. Give an account of India's population distribution by density with the reasons responsible for the same.
19. What is the role of NPP 2000 in the life of adolescents ?
20. What do you mean by growth of population ?How it is calculated?
21. Give uses of any five medicinal Plants found in India
22. Critically examine the operation of Public Distribution System in India.
23. Describe the current status of PDS in India.
24. What is the role of Cooperatives in food security?
25. Write a short note on Academy of Development Science in innovative food security intervention.

**L-4: Electoral Politics L-5: The Working of Institutions L-6: Democratic Rights.**

**ASSIGNMENT-4**

**Questions carrying 3/5 marks**

1. What legal declaration is required to be submitted by candidates to contest in election?
2. What kind of unfair practices are used during election?

3. What is the Model of Code of Conduct for Election Campaign?
  4. Why had Mandal Commission become a debatable issue in India?
  5. State how working with institution is not an easy task?
  6. In what ways does the Lok Sabha exercise more power than Rajya Sabha?
  7. Differentiate between the Political Executives and Permanent Executives.
  8. Describe the classification of Council of Ministers in India.
  9. What is the role of the Prime Minister in a Coalition government?
  10. Why was Mandal Commission appointed? What did it suggest?
  11. What procedures should a citizen follow to get proper legal justification if he or she is arrested?
  12. Why did Dr. B R Ambedkar call the Right to Constitutional remedies 'the Heart and Soul' of our Constitution?
  13. Why do some rights need to be placed higher than the government?
  14. Define the term Party Ticket? How does a party file a nomination for its candidates?
- Questions carrying 5 marks
15. What are the minimum conditions for a Democratic Election?
  16. Critically examine the impact of Electoral Competition.
  17. Why were the Reserved Constituencies devised for the weaker section?
  18. What are challenges to free and fair election in India?
  19. Describe the process of Democratic Election.
  20. What is an Election Commission? What is its role in the election?
  21. 'The Prime Minister is the real executive head of our country.' Elucidate.
  22. State the powers of Prime Minister.
  23. State the powers of President.
  24. What is the status of citizens of Saudi Arabia?
  25. What are rights? How can we claim a right?

#### SUB: G. SCIENCE

1. Practice the given assignments.
2. Revise the chapters and practice diagrams for class test after holidays.
3. Complete the practical files and submit for assessment on 11<sup>th</sup> Jan 18.
4. Learn valencies given in table 3.6 pg 37 of NCERT book and practice the formula writing.

### **Physics Assignment, Ch: Gravitation**

1. Give any two points of differences between mass and weight of the body.
2. A body weighs 10 kg on the surface of earth. What would be its mass and weight at the centre of earth?
3. On the earth, a stone is thrown from a height in a direction parallel to the earth's surface while another stone is simultaneously dropped from the same height. Which stone would reach the ground first and why?
4. On earth, value of  $G = 6.67 \times 10^{-11} \text{ N m}^2 \text{ kg}^{-2}$ . What is its value on moon, where  $g$  is nearly (1/6)<sup>th</sup> that of earth.
5. According to Newton's third law of motion, a ball falling towards earth exerts a force on the earth but the motion of earth towards the ball is not noticed. Explain why?
6. The gravitational force between two objects depends only on their masses and distance of separation. The objects may be at rest or rotating. Is this statement correct?

7. A sphere of mass 40 kg is attracted by a second sphere of mass 60 kg with a force equal to  $4 \times 10^{-5}$  N. Calculate the distance between the two spheres. (ans. 6 cm approx.)
8. How universal gravitation constant is different from acceleration due to gravity?(give 3 points.)
9. What happens to the force between two objects if (a)the masses of both objects are doubled?  
(b)the distance between them is reduced to half, (c)masses of both objects are tripled?
10. State Kepler's three laws of planetary motion. How did Newton guess the inverse square rule from these laws?
11. A ball is thrown up vertically returns to the thrower after 10 second. Calculate  
(i)the velocity with which it was thrown up.  
(ii)the maximum height it reaches, and  
(iii)its position after 7 second.
12. The weight of a body at some place on the equator is W. Explain, how this weight changes when it taken to the pole of the earth.
13. At what height above earth's surface would the value of acceleration due to gravity be half of what it is on the surface? Take the radius of earth to be R.
14. A block weighing 1.0 kg is in the shape of a cube of length 10 cm. It is kept on a horizontal table. Find the pressure on the portion of the table where the block is kept.
15. A solid body of mass 150g and volume  $250\text{cm}^3$  is put in water. Will the body float or sink?
16. (a) When does a body sinks in a fluid?  
(b)Why does a balloon filled with hydrogen gas rise up against gravity?
17. If two equal weights of unequal volumes are balanced in air, what will happen when these are completely dipped in water?
18. Two different objects are completely immersed in water and undergo same loss in weight. Is it necessary that the weight of these objects in air be also the same?
19. Two different objects are completely immersed in water and undergo same loss in weight. Is it necessary that the weight of these objects in air be also the same?
20. A body weighs 10 N in air and 8 N when fully immersed in water. How much is the buoyant force acting on the body?
21. A piece of iron of density  $7.8 \times 10^3\text{kg/m}^3$  and volume  $100\text{ cm}^3$  is totally immersed in water. Calculate (a) the weight of the iron piece in air (b) the upthrust and (c) apparent weight in water. (ans. (a) 7.8N (b) 1N (c) 6.8 N)
22. Find the thrust acting on the human body due to atmospheric pressure. Take the surface area of a man of middle size to be  $1.5\text{m}^2$  and atmospheric pressure (1atm)  $=1.013 \times 10^5$  Pa. (ans.15.2 ton wt)
23. Why does a person feel pain when he stands on a pile of gravel than when he stands on a bed of sand?
24. A thread of mercury of 10.2 g is in a tube of uniform cross-section  $0.1\text{ cm}^2$ . Calculate the length of the thread. The density of mercury is  $13.6\text{ g/cm}^3$ .
25. A pressure of 10 Pa acts on an area of  $3\text{ m}^2$ . What is the force acting on the area? What force will be exerted by the application of same pressure if the area is made one-third?

**CHEMISRTY ASSIGNMENTS**  
**CH:ATOMS & MOLECULES**

Q.1) Write down the names of compounds represented by the following formulae:

- (a)  $\text{Al}_2\text{O}_3$                       (b)  $\text{Ca}_3(\text{PO}_4)_2$   
(c)  $\text{K}_2\text{SO}_4$                       (d)  $\text{Na}_2\text{S}$

Q.2) what is formula mass? Calculate formula mass of NaCl.

Q.3) Calculate the number of molecules present in

- (A) 0.9g of water      (b) 1.7g of ammonia

Q.4) An element 'X' has a valency 3(+)

- (a) Write the formula of its phosphide.  
(b) Write the formula of its carbonate.

- Q.5) which of the following are tri-atomic and tetra- atomic molecules.  
 $\text{CH}_3\text{Cl}$ ,  $\text{CaCl}_2$ ,  $\text{NH}_3$ ,  $\text{PCl}_3$ ,  $\text{P}_2\text{O}_5$ ,  $\text{H}_2\text{O}$ ,  $\text{C}_2\text{H}_5\text{OH}$ .
- Q.6) Calculate the formula mass of Sodium Carbonate ( $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$ )
- Q.7) Write the formula of the compounds formed by the following ions.  
 (a)  $\text{Cr}^{3+}$  and  $\text{SO}_4^{2-}$  (b)  $\text{Pb}^{2+}$  and  $\text{NO}_3^{1-}$
- Q.8) Calculate the mass per cent of each element of sodium chloride in one mole of it.
- Q.9) how many (a) molecules (b) hydrogen atoms (c) oxygen atoms are there in 0.5 mol of water?
- Q.10) how will you define the following?  
 (A) Atom (B) Atomic Mass  
 (C) Molecular mass
- Q.11) Write the molecular formulae of all the compounds that can be formed by the combination of following ions  
 $\text{Cu}^{2+}$ ,  $\text{Na}^+$ ,  $\text{Fe}^{3+}$ ,  $\text{Cl}^-$ ,  $\text{SO}_4^{2-}$ ,  $\text{PO}_4^{3-}$
- Q.12) Verify by calculating that  
 (a) 5 moles of  $\text{CO}_2$  and 5 moles of  $\text{H}_2\text{O}$  do not have the same mass.  
 (b) 240g of calcium and 240g of magnesium elements have a mole ratio of 3:5.
- Q.13) Write the formulae for the following and calculate the molecular mass of each one of them.  
 (a) Carbon tetra chloride (b) Baking powder  
 (c) Lime stone (d) Caustic soda  
 (e) Ethanol (f) Common salt
- Q.14) How many moles are present in 4g of sodium hydroxide.
- Q.15) Calculate the number of moles present in  $3.011 \times 10^{23}$ .
- Q.16) Calculate the molecular mass of the following  
 (a)  $\text{H}_2\text{CO}_3$  (b)  $\text{C}_2\text{H}_5\text{OH}$  (c)  $\text{H}_2\text{SO}_4$
- Q.17) Give three significance of mole.
- Q.18) Calculate the number of particles in each of the following.  
 (a) 46g of Na atom (b) 8g of  $\text{O}_2$  molecules  
 (c) 0.1 moles of carbon atom
- Q.19) which of the following symbols of elements are incorrect? Give their correct symbols.  
 (a) Cobalt CO (b) Carbon c  
 (c) Aluminum AL (d) Helium He  
 (d) Sodium So
- Q20. ) Verify by calculating that  
 (a) 5 moles of  $\text{CO}_2$  and 5 moles of  $\text{H}_2\text{O}$  do not have the same mass.  
 (b) 240g of calcium and 240g of magnesium elements have a mole ratio of 3:5.

### CH:STRUCTURE OF ATOM

- Q.1) Write two characteristics of the canal rays. Why they have been named so?
- Q2.) State all the rules used to write electronic configuration of an element.
- Q.3) The atomic number of lithium is 3. Its mass number is 7.  
 a) How many protons and neutrons are present in a lithium atom?  
 b) Draw the diagram of a lithium atom.
- Q.4) The nucleus of an ion has a charge of 16 units and the ion has a charge of -2 units. How many electrons are present in the ion ? Name the ion & write its symbol.
- Q.5) The atomic number of Al and Cl are 13 and 17 respectively. What will be the number of electrons in  $\text{Al}^{3+}$  and  $\text{Cl}^-$  ?



- Q.6) In the atom of an element 'Z', 5 electrons are present in the outermost shell. It requires noble gas configuration by accepting requisite number of electrons, then what would be the charge on the ion so formed? Write the formula of the compound which will be formed when 'Z' reacts with Na atom
- Q.7) An ion has one neutron more than the number of protons but has one electron less than the number of protons. Which two ions are possible which satisfy this condition? Explain.
- Q.8)  $^{222}_{86}\text{Rn}$  is an isotope of noble gas, radon. How many protons, neutrons and electrons are there in one atom of this radon isotope?
- Q.9) What are isotopes? Why do isotopes show similar chemical properties? Give three important applications of isotopes in various fields.
- Q.10) Comment on the ratio, charge/mass (e/m) of the particles constituting (i) Cathode rays (ii) Anode rays.
- Q.11) Show diagrammatically the electron distribution in a potassium atom and a potassium ion and also give their atomic number.
- Q.12) Why do helium, neon and argon have zero valency?
- Q.13) What do you understand by ground state of an atom?
- Q.14) How do you know that nucleus is very small as compared to the size of atom?
- Q.15) Some radioactive isotopes are playing increasingly important roles in medicines. Write down the name of one such isotope and briefly describe its use in medicine.

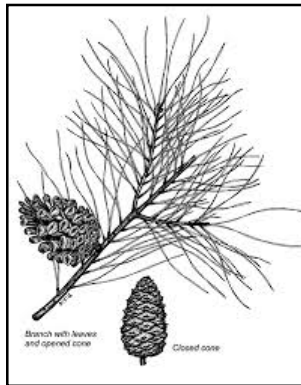
### Biology Assignment – Diversity of living organisms

1. Write two characteristic features of Kingdom fungi.
2. Why are Bryophytes known as Amphibians of plant Kingdom ?
3. How do thallophytes and pteridophytes differ from each other?
4. Write two important characteristics of sponges.
5. List any two basis of five kingdom classification proposed by Robert Whittaker. Mention in brief the basis of classification between
  - (a) bacteria and fungi
  - (b) plants and animals
6. What is coelom ? state its significance.
7. Write two differences between bony fish and cartilaginous fish along with suitable examples.
8. (b) Pick out the organisms that have a pseudocoelom from the following :  
Earthworm, pinworm, tapeworm and roundworm
9. What is peculiar about the coelom of arthropods ? What is that condition called ?
10. What are the main features of phylum coelenterate ?
11. Write important features about Phylum Platyhelminthes.
12. What is the type of circulatory system present in Arthropods? Explain.
13. What is a notochord? What does it do?
14. List important characteristics of Phylum Protochordata.
15. How is locomotion brought in animals belonging to Mollusca phylum?
16. 'Animals belong to phylum coelenterata are diploblastic.' What do you mean by the term diploblastic?
17. What do you understand by nomenclature ? Who introduced this system ?
18. Give reason to justify the following statements: (F.C)
  - i. Platypus and echidna lay eggs but are considered as mammals,
  - ii. Crocodile have four chambered heart but are still reptiles
  - iii. Forelimbs of birds are modified.
19. Pick the odd one out and justify your choice by giving reasons :
  - (a) Riccia , Marsilea, Marchantia and Funaria
  - (b) Crocodile, salamander, sparrow and bat
20. (a) Name the Biologist who first introduced the system of Binomial nomenclature.  
(b) Write any two conventions that are followed while writing the scientific name.  
(c) Write the scientific name of the 'common frog'.
21. In which kingdom you will place an organism which is multicellular, eukaryotic, non-green heterotroph or saprophytic, lacks chlorophyll and has absorptive mode of nutrition?

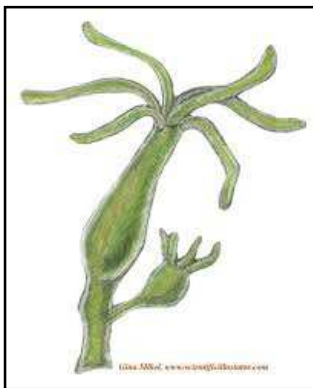
22. In which kingdom, you will place an organism which is multicellular eukaryotic, heterotroph, lacks chlorophyll and has ingestive mode of nutrition ?
23. To which phylum of animalia do the following animals belong to :  
Octopus, Pila, and Unio - Comment on their coelom.
24. Write the name used for the following :  
(a) Plants which bear naked seeds.  
(b) Animals which have pseudocoelom  
(c) Animals which maintain certain body temperature over wide range of temperature in the environment..
25. Draw a neat diagram of spirogyra and label the following parts :  
(a) organelle that perform the function of photosynthesis.  
(b) dark coloured structure generally present in the centre.  
(c) Jelly like substance in the cell where all organelles are suspended & outermost layer of the cell.
26. List important characteristics (at least three) of bryophytes.
27. List three characteristics which help us to distinguish amphibians to pisces.
28. Why Blue green algae are classified with bacteria and placed in kingdom Monera ?
29. Why are Thallophytes called non-embryonic plants?
30. List three differences between monocot plants and dicot plants.
31. You are given leech, Nereis, Scolopendra, Prawn and scorpion and all have segmented body organisations. Will you classify them in one group ? If no, give the important characters based on which you will separate these organisms into different groups.
32. Classify the following organisms into their respective kingdoms as per Whittaker's five-kingdom system : humans, mushroom, herbs, amoeba, E.coli, euglena, mould, birds, insects, bushes, paramoecium, trees, dogs, streptococcus.
33. (a) Identify the given figures .  
(b) Write their division/phylum and two characteristic features.



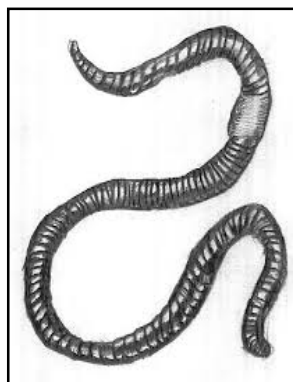
(A)



(B)



(C)



(D)

**Value Based Questions :**

34. While walking along roadside Sunil asked his elder brother who is a biologist, whether some small, non-flowering, leafy and thalloid plants having little differentiation of body and growing along pavement are of any

use to us. His brother answered that these plants are small but they play a very important role in maintaining green cover on the land. When Sunil tries to pluck these plants, his brother tells him not to do so.

Answer the following questions :

- To which group these small thalloid, green, non-flowering plants belong to. ?
- How are these plants useful to us ecologically ?
- Which other groups of plants act as colonizers of barren rocks and make land suitable for growth of higher plants ? Do these plants play some role in pollution monitoring ?
- What values are displayed by Sunil brother ?

35. Rajat was playing cricket in the ground with his friends. One of his friend who was standing near the boundary felt something climbing upon his feet. Subsequently he started crying in pain. Rajat being class nine student, identified the climbing creature as leech and helped removing the leech.

Answer the following questions :

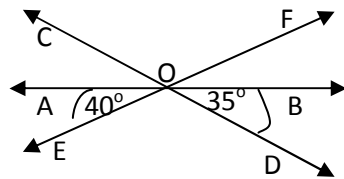
- Name the phylum to which leech belongs.
- Write two identifying features of the phylum.
- Enlist two values shown by Rajat.

## Maths-Assignment – 2, Class – IX

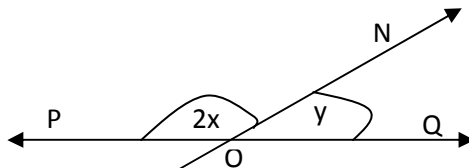
### Topic – Lines & Angles

#### Thinking skill Based

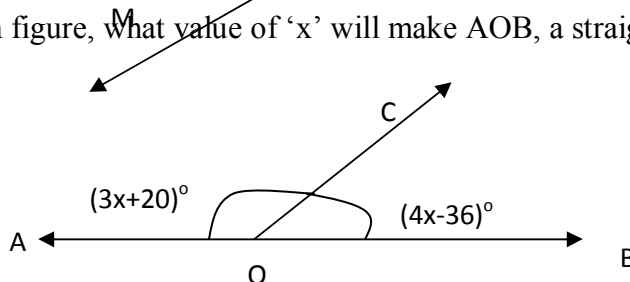
- Define and the following terms: (i) Angle (ii) Obtuse angle (iii) Complementary angles (iv) Supplementary angles (v) Adjacent angles
- Define and draw the following: (i) Linear pair of angles (ii) Vertically opposite angles
- Find the complement of the following angles: (i) 58 (ii) 45
- Find the supplement of the following angles: (i) 90 (ii) 120
- Two supplementary angles are in the ratio 3:2. Find the angles.
- In the given figure, lines AB, CD and EF intersect at O. Find the measures of  $\angle AOC$  and  $\angle COF$ .



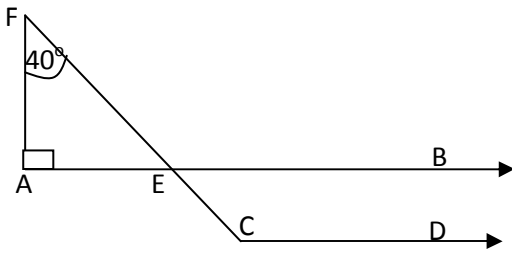
- In the given figure PQ and MN intersect at O (i) Determine y when  $x = 60^\circ$  (ii) Determine x when  $y = 40^\circ$



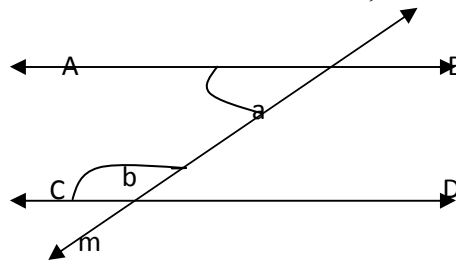
- In the given figure, what value of 'x' will make AOB, a straight line?



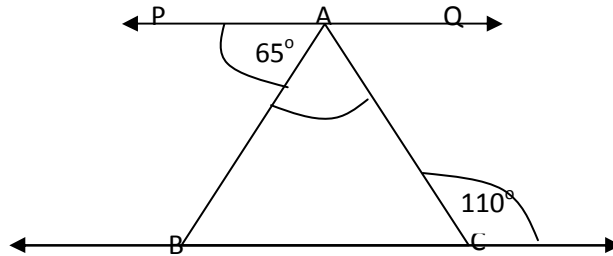
9. One of the four angles formed by two intersecting lines is a right angle. Show that the other three angles will also be right angles.
10. Prove that the two lines which are both parallel to the same line are parallel to one another.
11. In the figure,  $AB \parallel CD$  and  $\angle F = 30^\circ$  Find  $\angle ECD$ .



12. In the given figure, if  $b : a$  are in  $3:2$  and  $AB \parallel CD$ , find  $a$ .

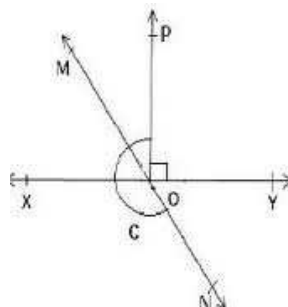


13. Two parallel lines are cut by a transversal such that one of the interior angles is  $57^\circ$ . Find each of the interior angles.
14. In the given figure,  $PQ \parallel BC$ , find the value of  $x$ .

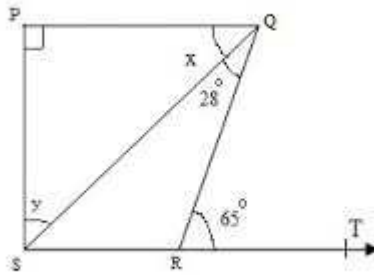


### H.O.T.'s

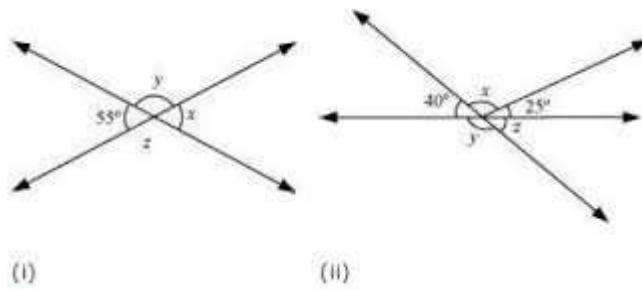
15. A transversal intersects two parallel lines. Prove that the bisectors of any pair of corresponding angle so formed are parallel.
16. Prove that sum of the angles of a hexagon is  $720^\circ$ .
17. In the given figure  $\angle POM : \angle MOX = 3 : 4$ , find  $\angle NOX$



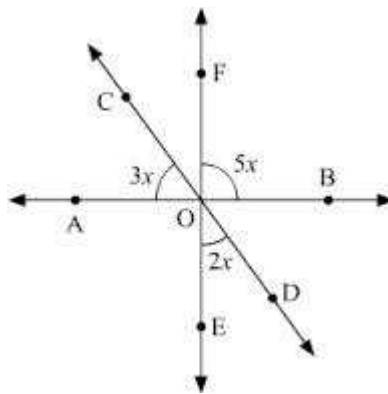
18. In the given figure  $PQ \parallel ST$ , find the value of 'x' and 'y'.



19. In the given figure find the value of 'x', 'y' and 'z'

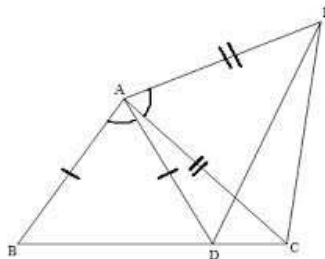


20. Find 'x' and all the angles

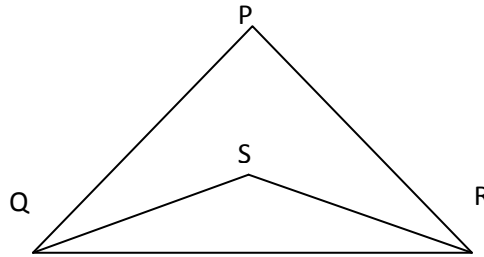


### Triangles

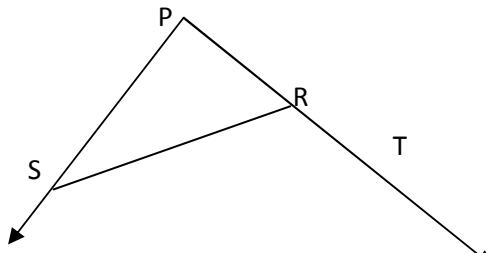
21. In the given figure,  $AC = AE$ ,  $AB = AD$  and  $\angle BAD = \angle CAE$ , show that  $BC = DE$ .



22. Prove that each angle of an equilateral triangle is  $60^\circ$ .
23. D is a point on side BC of ABC such that  $AD = AC$ . Show that  $AB > AD$ .
24. Prove that any two sides of a triangle are together greater than twice the median drawn to the third side.
25. In right triangle ABC, right angled at C, M is the mid point of hypotenuse AB. C is joined to M and produced to a point D such that  $DM = CM$ . Point D is joined to point B. Show that (i)  $\angle AMC = \angle BMD$  (ii)  $\angle DBC$  is a right angle (iii)  $\angle DBC = \angle ACB$  (iv)  $CM = \frac{1}{2} AB$ .
26. In the given figure  $PQ > PR$  and QS and RS are the bisectors of Q and R respectively. Show that  $SQ > SR$ .



27. In the given figure, sides PQ and PR are produced and  $\angle TQR < \angle SQR$ . Prove that  $PQ > PR$ .



28. In the given figure,  $PR > PQ$  and PS is the bisector of QPR. Show that  $X > Y$



29. Bisectors of the angles B and C of an isosceles triangle ABC with  $AB = AC$  intersect each other at O. Show that external angle adjacent to ABC is equal to  $\angle BOC$ .
30. If the bisector of an angle of a triangle also bisects the opposite side, prove that the triangle is isosceles.

#### Construction of triangle

- Construct the following angles and verify by measuring them by a protractor.  
(i)  $75^\circ$  (ii)  $135^\circ$
- Construct Triangle PQR with base  $QR = 3.8$  cm and  $\angle Q = 75^\circ$  and  $PQ + PR = 7.9$  cm
- Construct a triangle PQR with base  $QR = 3.4$  cm and  $\angle R = 75^\circ$  and  $PQ - PR = 1.2$  cm
- Construct an equilateral triangle with sides 4 cm.

5. Construct a triangle ABC in which  $\angle B = 60^\circ$  and  $\angle C = 45^\circ$  and  $AB+BC+CA = 13$  cm.
6. Construct a right triangle whose base is 12cm and sum of its hypotenuse and other side is 18cm.
7. Construct a triangle with its perimeter = 11cm and the base angles of  $75^\circ$  and  $30^\circ$ .

### Revision Assignment

- **Probability**
- **Statistical Data**

Q1 A coin is tossed 500 times with the following frequencies of two outcomes:  
Head:240 times, trails:260 times

Find the probability of occurrence of each of these events.

Q2 Two coins are tossed simultaneous 1000 times with the following frequencies of different outcomes:

Two heads: 210 times    One head: 550times    No line : 240times

Find the probability of occurrence of each of these events .

Q3 Three coins are tossed simultaneously 200 times with the following frequencies of different outcomes.

Outcomes:    3 heads    2heads    1heads    no heads

Frequency:    23            72            77            28

Find the probability of getting: (i) three heads (ii) two heads and one tail (iii) at least two heads.

Q4 The following table gives the number of students in class IX in a school during academic yrs 1996-1997 to 2000 -2001.

Academic	1996-97	1997-98	1998-99	1999-2000	2001-2002
Number of students	50	75	125	150	200

Q5 The following table gives the number of vehicles passing through a busy crossing in Delhi in different time intervals on a particular day.

Time intervals	8 to 9 hrs	9 to 10 hrs	10 to 11 hrs	11 to 12 hrs	13 to 14 hrs
Number of vehicles	300	400	350	250	100

Q6 The following is the distribution of weights (in kg) of 50 persons:

Weight (in kg)	50-55	55-60	60-65	65-70	70-75	70-80	80-85	85-90
No. of persons:	12	8	5	4	5	7	6	3

Q7 Represent the following following data by means of histogram.

Weekly wages in (in Rs)	10-15	15-20	20-25	25-30	30-40	40-60	60-80
No.of workers (Frequency):	7	9	8	5	12	12	8

Q8 Given below are the age of 25 students of class IX in a school. Prepare a discrete frequency distribution.

15, 16, 16, 14, 17, 17, 16, 15, 15, 16, 16, 17, 15, 16, 16, 14, 16, 15, 14, 15, 16, 16, 15, 14, 15.

Q9 From a discrete frequency distribution from the following points score: 15, 18, 16, 20, 25, 24, 25, 20, 16, 15, 18, 18, 16, 24, 15, 20, 28, 30, 27, 16, 24, 25, 20, 18, 28, 27, 25, 24, 24, 18, 18, 25, 20, 16, 15, 20, 27, 28, 29, 16,

Q10 The water tax bills (in rupees) of 30 houses in a locality are given below. Construct a grouped frequency distribution with class size of 10.

30, 32, 45, 54, 74, 78, 108, 112, 66, 78, 88, 40, 14, 20, 15, 35, 44, 66, 75, 84, 95, 96, 102, 110, 88, 74, 112, 14, 34, 44.

Q11 Construct a histogram from the following distribution of total marks obtained by 65 students of IX class in the final examination.

Marks:	145-155	155-165	165-175	175-185	185-195
No. of students	8	10	25	7	7

\*\*\*\*\*

## Hindi

स्पर्श एवं संचयन - सभी पाठों की पुनरावृत्ति करो।

## संस्कृत

1. पाठ 10 से 14 संस्कृत together with में समस्त अभ्यास करने के लिए।

2. सभी सर्वनाम, अजन्त, हलन्त, संख्या शब्द रूप तथा परस्मैपद, आत्मनेपद, उभयपद

धातुरूप स्मरण व अभ्यास हेतु।

3. सभी स्वर, व्यंजन, विसर्ग सन्धि तथा कारक उपपद विभक्ति स्मरण व अभ्यास हेतु।