



**Cir No.**

**17 March 2020**

**Dear Parents,**

The school is deeply concerned about the health of the students and each one of you in the wake of a sudden and unprecedented surge in cases of Corona Virus (COVID 19), which has been declared as pandemic recently. As PM has rightly said, '*Precautions not panic*' that can keep ourselves and others from becoming victims to this epidemic. Kindly adhere to the following precautionary measures strictly:

- Wash hands with soap and water frequently
- Cover the mouth and nose when sneezing or coughing
- Handle food with clean hands
- Eat healthy food and avoid eating out
- Drink only boiled water or use water purifiers
- Use a mask, if possible
- Avoid going to crowded places

As the school will remain closed till 31<sup>st</sup> March, we seek your whole-hearted cooperation to ensure that:

- **your ward completes the uploaded assignments properly**

(available on [www.akmsggn.com](http://www.akmsggn.com) ----→ Downloads tab ---→ Assignment----→ Choose class)

- he/she reads extra books and other useful material to enhance their knowledge
- he /she does not waste time watching TV and using social networking sites
- he /she has a time schedule for studies and follows it strictly
- he/ she inculcates good habits and values
- he/ she reads a few initial chapters of all subjects and be familiar with them
- he/she prepares well for the tests that will be conducted as soon as the school reopens  
(only for classes IX & X)
- and finally that you spend quality time with them everyday

**Stay safe and healthy. May you be protected!**

Regards,

Principal  
Ms.Anshu Nakra

## Assignment -01

### English Language

#### DO AS DIRECTED:

1. The man said to me, "I do not know the route." (Begin: The old man told...)
2. The man said to the child, "Lying is a bad habit." (Begin: The man told...)
3. Ray said to his mother, "Daniel has stolen my notebook." (Begin: Ray told...)
4. Meenal said to her father, "How do you know that I returned late?" (Begin: Meenal asked...)
5. The boy said to his brother, "When do you plan to leave for work?" (Begin: The boy asked...)
6. "Whom should I approach to get the work done?" the man said to the clerk. (Begin: The man asked...)
7. "Do you know who Akash is?" my brother said to me. (Begin: My brother asked...)
8. "When is the picnic scheduled?" my sister said to me. (Begin: My sister...)
9. "Throw the papers into the dustbin," the teacher said to the students. (Begin: The teacher ordered...)
10. "Reach home and inform me please," my sister said to me. (Begin: My sister requested...)
11. The man said, "How beautiful the flower is!" (Begin: The man exclaimed...)
12. "Alas! Our team has lost," the captain said. (Begin: The captain told...)
13. Radha told me that she had seen me in the market the previous day. (Begin: Radha said to me, "...")
14. The commander ordered the soldiers to continue marching without looking back. (Begin: The commander said...)
15. My sister requested me to pass the plates. (Begin: My sister said...)
16. The teacher told us that learning computers would help us in future. (Rewrite in direct speech)
17. I asked my brother if he had seen my English notebook. (Begin: I said...)
18. My mother asked me when I would return home that day. (Rewrite in direct speech).

#### CHANGE THE VOICE:

19. They make these cars in Japan.
20. You must not drop litter in the street.
21. They have already mended the TV set.
22. People will need public transport.
23. They are decorating the wall.
24. You should not replace the roof.
25. Someone was building the wall when I was there
26. We were received by the hostess.
27. The snake was killed with a stick.
28. The minister was welcomed by the people.
29. He was found guilty of murder.
30. This house was built by John Mathews in 1991.
31. Who gave you this key?
32. Have the dolphins learned the tricks?
33. Did Julie learn her lessons?
34. They make coffee in Brazil
35. Brian Brody directed *The Ultimate Space Adventure*.
36. My computer will be delivered by them soon.
37. Is the painting completed by her?
38. Stanley wrote this article.

**Assignment -2**  
**English Language**

**Write a composition (300-350) on any one of the following:**

- a) Write an original story that illustrates the moral: 'Self-help is the best'.
- b) 'Industrialisation has deprived many people of their traditional occupations'. Express your views either 'for' or 'against' this statement.
- c) You have recently purchased some gadgets for household use. You find them very useful, but your grandparents sneer at them. Describe the gadgets and your own feelings for them.
- d) You are in the habit of taking lift at odd hours. Narrate what frightened you one night when you were in the car of a total stranger.
- e) Study the picture given below:  
Write a short story or description or an account of what the picture suggests to you. Your composition may be about the subject of the picture or you may take suggestions from it.



**Question 2**

[Do not spend more than 20 minutes on this question.]

- a) Your younger brother who is in the same boarding school with you has got into some serious trouble. Write a letter informing your parents about it.

**Question 3**

- a) Your school is organizing a charity show in aid to the victims of recent floods. Write a notice to be put up on the school notice board inviting names of students from class IX-X interested in participating. Also encourage them to contribute generously to the cause.
- b) Write an email to the neighbouring schools inviting them to the charity show. Request them to contribute generously for the victims.

**Question 4**

**Read the following passage carefully and answer the questions that follow:**

When I told my family that I was thinking of taking a cooking job, the roar of laughter was rather discouraging. No one believed that I could cook at all, as I had never had a chance to practice cooking at home. Our cook, aged sixty five and slightly couched, had ruled in the kitchen for the last thirty years and had an irritating tendency to regard all saucepans, stove and indeed all the kitchen fittings to be her own property.

I once crept down there when I thought she was asleep in her room to try out an omelette. Noiselessly, I removed a frying pan from its hook and the eggs from the cupboard. It was the top of the gas that woke her, I think, for I was just breaking the first egg when a pair of slippered feet **shuffled** round the door and a shriek of horror caused me to break the egg on the floor. This disaster, together with the fact that I was using her one very special beloved and delicately cared-for-frying-pan, upset her so much that she locked herself up in her room with all the food, and we had to make our Sunday dinner of bananas. If the family wasn't going to be helpful, I would look for a job all by myself and not tell them about it till I had got one. I had no idea of exactly what job I should apply for, so I decided to

go to an agency. I had seen one advertisement in the newspaper, so as soon as there was no one to say, 'where are you going?' I rushed out of the house in search of it.

I was wildly excited and as nervous as if I were going to stage an **audition**. Finding the place quite easily, I climbed up three flights of stairs and swung breathlessly through a door which said: Enter without knocking, if you please. The dingy, bottle-green atmosphere of the office **sobered** me, and I sat meekly on the chair and could see your nose shining out of the corner of my eye. I thought perhaps it was a good thing; I could look more earnest. The women at the desk opposite scrutinized me for a while through rimless glasses, and I became absorbed in the question of whether she wore a wig or not. I had just decided that it was too undesirably shabby to be anything but her own hair, when I realized that she was murmuring questions at me. I answered in a hoarse whisper because it seemed to be the thing, and all of a sudden, I started to feel rather pathetic. She hinted in a delicate way that she wondered why I was looking for this sort of job, so I felt impelled to give her a glimpse of a widowed mother and a desperate struggle against poverty. I almost made myself believe in the pathos of it, and we had to cough and change the subject.

I felt even more pathetic when they told me that it would be difficult to get a job without experience or reference. She rustled about among her papers for a bit and I wondered whether I ought to leave, when the telephone on her desk rang. While she was conducting a mysterious conversation she kept looking at me. Then I heard her say, "As a matter of fact, I've got someone in the office this very moment who might suit you". She wrote down a number and my spirits soared as I took the slip of paper she held to me saying; "Ring up this lady, she wants a cook immediately. In fact, you would have to start tomorrow by cooking dinner for ten people. Could you imagine that I wonder?"

"Oh yes," said I ... Never having cooked for more than four people in my life.

- a) Give the meaning of each of the following words as used in the passage. One word answers or short phrases will be accepted.
- i. Shuffled
  - ii. Audition
  - iii. Sobered
- b) Answer the following questions briefly, in your own words:
- i. Why did the writer's family laugh when she told them that she was thinking of taking a cooking job?
  - ii. What made the cook angry and upset?
  - iii. What reason did the writer give for looking for a job?
  - iv. Give two reasons why the writer was breathless when she entered the office.
  - v. What did the woman speak on the telephone?
- c) In not more than 50 words of your own, state the writer's experience at the office: 8

### Question 5

- a) Fill in each of the numbered blanks with the correct form of the word given in brackets. Do not copy the passage but write in correct serial order the word or phrase appropriate to the blank space. [4]

Helen was now quite sure that she \_\_\_\_\_ (1) \_\_\_\_\_ (be going) to miss her train, although she \_\_\_\_\_ (2) \_\_\_\_\_ (be) not very far from the station. She \_\_\_\_\_ (3) \_\_\_\_\_ (wonder) what \_\_\_\_\_ (4) \_\_\_\_\_ (do) when a bus \_\_\_\_\_ (5) \_\_\_\_\_ (come) into sight, \_\_\_\_\_ (6) \_\_\_\_\_ (go) in the direction of the station. The bus stop \_\_\_\_\_ (7) \_\_\_\_\_ (be) not far off, so Helen got her suitcase out of the taxi and \_\_\_\_\_ (8) \_\_\_\_\_ (run) towards the bus.

- b) Fill in each blanks with an appropriate word:
- i. The minister hinted \_\_\_\_\_ changing the rules.
  - ii. I insisted \_\_\_\_\_ getting the correct book from the shopkeeper.
  - iii. I am satisfied \_\_\_\_\_ your work.
  - iv. Gold is superior \_\_\_\_\_ silver.
  - v. My mother told me to go \_\_\_\_\_ my notes before examination.
  - vi. The boy who cried wolf liked to make \_\_\_\_\_ stories to fool the people.

- vii. Everyone desires \_\_\_\_\_ peace.
- viii. My friend said I could count \_\_\_\_\_ her help.

c) Join the following sentences to make one complete sentence without using 'and' 'but' or 'so'.

- i. He will die one day. All men are mortal
- ii. Try to be honest. Try to be faithful.
- iii. Is she awake? Is she asleep?
- iv. Don't violate the road rules. You will be involved in an accident.

d) Re-write the following sentences according to the instructions given after each. Make other changes that may be necessary, but do not change the meaning of each sentence

- i. The servant cleans the room three times a day.  
[Use the verb 'cleaned'].
- ii. "What do you mean by coming in like this?" said the man to the stranger.  
[Begin: The man asked]
- iii. Few teachers teach as well as Ankush.  
[Begin: Ankush teaches .....]
- iv. Sardar Patel was so firm-minded that he could face every situation fearlessly.  
[Use the adverb too]
- v. His actions are very cruel.  
[Change it into exclamatory]
- vi. As soon as the tiger sprang upon the goat, the hunter killed it.  
[Begin: No sooner .....]
- vii. Unless the Germans attack first, the British will not open fire.  
[Begin: if .....]
- viii. He rejected their offer .  
[Use 'offer' as verb]

**Assignment 3**  
**English Literature**

Read the extract given below and answer the questions that follow:

*Thus ornament is but the guiled shore  
To a most dangerous sea; the beauteous scarf  
Veiling an Indian beauty; in a word  
The seeming truth which cunning times put on  
To entrap the wisest. Therefore, thou gaudy gold,  
Hard food for Midas, I will none of thee...*

- i. What request did Portia make to Bassanio in the beginning of the scene? What does it reveal about the former's feelings for the latter?
- ii. Explain: *I am then forsworn, so will I never be*. What is the dilemma of Portia at the moment?
- iii. Explain how the caskets prove that "the world is still deceived with ornament." What theme of the play is talked about in the extract?
- iv. What is the occasion of Bassanio's speech? What does the word *ornament* mean in the above extract? What does he say about Hercules and frowning Mars in the context?
- v. What reason does Bassanio give for rejecting the gold, and the silver caskets? What makes him choose the lead casket?

**Question 2.**

*Gratiano: My Lord Basanio and my gentle Lady.  
I wish you all the joy that you can wish  
For I am sure you can wish none from me:  
And when your honours mean to solemnize  
The bargain of your faith, I do beseech you,  
Even at that time I may be married too.*

- a) Give the context in which Gratiano speaks these words. What good wishes does he give to Bassanio?
- b) What request does Gratiano make to Bassanio?
- c) What condition does Basanio put regarding Gratiano's request?
- d) Explain how Gratiano's fortune too *stood upon the casket*?
- e) How has Gratiano-Nerissa episode added humour to the story in this given scene?

**Lt. Atul Katarya Memorial School**  
**Geography Assignment-1(Climat e and Soils in India)**

**Class-X**

1. Study the following climatic data and answer the questions:

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
temperature	23.8	25.0	27.7	28.3	30.2	30.3	30.4	30.3	30.0	30.3	25.5	24.2
Rainfall (cm)	0	0	1.1	1.5	2.1	45.3	46.5	45.4	43.3	20.1	3.0	0.1

1. Calculate the mean annual temperature. \_\_\_\_\_
2. What is the total rainfall during the monsoon season? \_\_\_\_\_
3. Does the station have a maritime climate or a continental climate? Give reason for your answer.

\_\_\_\_\_

\_\_\_\_\_

2. Study the following climatic data and answer the questions:

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
temperature	24.5	25.7	27.7	20.4	30.0	32.5	31.0	30.2	29.8	28.0	25.9	24.7
Rainfall (cm)	4.6	1.8	1.3	1.8	3.8	4.5	8.7	11.3	11.9	30.6	35.0	13.9

1. Name the driest month. \_\_\_\_\_
2. Calculate the annual rainfall experienced by the station. \_\_\_\_\_
3. What is the annual range of temperature? \_\_\_\_\_

3. Study the following climatic data and answer the questions:

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Station A												
temperature	21.0	22.6	26.3	29.2	29.7	27.5	25.1	24.5	24.8	25.5	22.5	20.5
Rainfall (cm)	0.1	0.1	0.5	1.5	2.7	11.4	16.7	9.0	13.4	9.0	2.7	0.3
Station B												
temperature	24.4	24.4	26.7	28.3	30.0	28.9	27.2	27.2	27.2	28.3	27.2	25.0
Rainfall (cm)	0.2	0.3	0.3	1.7	1.9	50.2	61.0	37.0	27.0	4.8	1.4	0.3

1. Calculate the annual range of temperature at station B. \_\_\_\_\_
2. Calculate the annual rainfall experienced by the station A. \_\_\_\_\_
3. Presuming that both the stations are located in West India, state giving a reason as to which of the two lies on the windward side of the Western Ghats?

\_\_\_\_\_

4. Study the following climatic data and answer the questions:

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
temperature	13.7	16.6	21.6	25.5	33.2	33.5	30.8	29.8	29.2	25.5	19.6	15.2
Rainfall (cm)	2.5	2.0	1.5	0.9	1.5	7.5	17.8	18.5	12.5	1.0	0.2	1.5

1. Calculate the annual range of temperature.
2. Calculate the total rainfall experienced by the station.
3. Which is the driest month?

5. Study the following climatic data and answer the questions:

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Station A												
temperature	14.4	16.7	23.3	30.0	33.3	33.3	30.0	29.4	28.9	25.6	19.4	15.6
Rainfall (cm)	2.5	1.5	1.3	1.0	1.8	7.4	19.3	17.8	11.9	1.3	0.2	1.0
Station B												
temperature	24.4	24.4	26.7	28.3	30.0	28.9	27.2	27.2	27.2	27.8	27.2	25.0
Rainfall (cm)	0.2	0.2	0.3	1.0	1.8	50.6	61.0	24.8	24.8	24.8	1.0	0.7

1. Calculate the annual range of temperature at station B. Suggest a reason why the range is small one?
2. Calculate the annual rainfall experienced by the station A.
3. Which of the two stations has an equable climate?
4. Which of the two stations has the lowest temperature? Why?

6. Study the following climatic data and answer the questions:

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Station A												
temperature	12.7	15.1	22.1	31.8	37.2	39.1	37.3	33.4	28	26.7	16.1	13.6
Rainfall (cm)	2.1	2.3	1.0	0.9	1.5	5.6	18.3	18.9	15.1	0.6	0.3	1.8
Station B												
temperature	23.1	24.8	26.5	29.3	32	32.8	33.1	32.1	30.5	29.3	28.7	26.1
Rainfall (cm)	15.3	10.1	0.3	0.1	1.3	4.5	6.1	10.2	10.5	20.1	16.8	19.0

1. Calculate the annual range of temperature at station B.
2. Calculate the annual rainfall experienced by the station A.
3. Name the winds that bring most of the rainfall to station B. state one reason for your answer.

Answer the following questions:

1. Red soil is red in colour. Why?
2. Khaddar soils are preferred to bhangar soils. Why?
3. Name the soil which is sticky when wet and cracks when dry.
4. Large tracts of Maharashtra are covered with black soil. Why?
5. Mention two ways by which soil can get nitrogen.
6. State two reasons for the low productivity of red soil.
7. Give two reasons to explain why crops cannot grow well in desert soil.
8. Which type of soil is found due to disintegration of basalt? Give two characteristics of this type of soil. Mention two important crops grown in this soil.
9. Name the transported soil most widely found in India. State two sub categories of into which it is generally divided. What are their local names? Which of them is superior to the other?
10. Explain the term leaching. With which type of soil it is associated?
11. Cyclonic rain is caused in two regions in India. Name the type of rain and the region where they are caused.
12. Describe the climatic conditions that exist in the subcontinent before the South-West monsoons.
13. Give the two climatic differences of 1. Cherrapunji and Shilong 2. Mumbai and Lukhnow.
14. India can be described as the “the land of endless seasons”. Give any two reasons to support the above statement.

**Lt. AtulKatarya Memorial School**  
**Geography Assignment-2 (Natural Vegetation)**  
**Class-X**

**Q1. Define the following terms:**

- a) Virgin vegetation
- b) Flora
- c) Vegetation
- d) Forest
- e) Afforestation

**Q2. Answer the following questions:**

- a) What is National Forest Policy of India? Give its objectives.
- b) How Social Forestry is important in the present scenario? What is the aim of Social Forestry?
- c) How Agro Forestry is important in the present scenario? What is the aim of Agro Forestry?
- d) What is the role of forests in the protection of environment?
- e) What is the difference between moist deciduous and dry deciduous?
- f) Write the economical values of Rain Forests and Monsoon Forests.
- g) Write the economical values of Desert vegetation and Tidal Forests.
- h) Which is the most important vegetation belt of India in the commercial point of view? Give three reasons.
- i) Why Rainforest are difficult to exploit?

- j) How do the desert forests adapt themselves in the arid conditions?
- k) Which type of agricultural practice is destructive towards forests? Mention two policies adopted by the Central Board of Forestry for conservation of forests?
- l) Differentiate between afforestation, deforestation and reafforestation.
- m) What measures can help to sustain forests resources in urban areas?

**LT ATUL KATARYA MEMORIAL SCHOOL**  
**History & Civics (Class IX)**  
**ASSIGNMENT -1 (CH-2( C ), Ch-7 (H) )**

- Do all short Questions of back exercise from ch-7 (H) and Ch-2( C )
- Revise both the chapters for class test

**Assignment-2 Ch-1 to Ch- 5 History**

- Q.1 Discuss the economic causes that led to the revolt of 1857.
- Q.2 What was the immediate cause of the revolt of 1857?
- Q.3 Write the administrative changes related to the revolt of 1857.
- Q.4 Discuss the role of JyotibhaPhule in bringing Nationalism in the country.
- Q.5 What were the Pre Cursor of the Indian National Congress? Write their objectivesalso.
- Q.6 Write the immediate objectives of Indian National Congress.
- Q.7 What were the demands of the Congress at its infancy?
- Q.8 Differentiate between the methods of Moderate and Assertive.
- Q.9 Write the role of DadabhaiNaoroji.
- Q.10 Write the role of LalaLaj Pat Rai.
- Q.11 What led to the split in the Congress?
- Q.12 Write the real motive behind the partition of Bengal

**Subject:Physics**

**Assignment I**

- 1)How can we produce maximum turning effect on a body by a given force?
- 2)Establish relationship between SI & CGS unit of following physical quantities:
  - (i)Moment of force
  - (ii)Work & Energy
  - (iii)Power
  - (iv)Moment of couple
- 3)A spanner used to tighten or loosen a nut, has a long handle. Give reason.
- 4)Explain the principle of physical balance.
- 5)Name the object/source/cause, that provides the centripetal force, for:
  - (i)moon, orbiting around the earth
  - (ii)mars, orbiting around the sun

(iii)the electron, orbiting the nucleus of the atom

(iv)a ball, being whirled in a circle, with the help of a string, attached to it.

6)A stone of mass  $m$  is rotated in a circular path with a uniform speed by tying a strong string with the help of your hand.

Answer the following question:

(i)Is the stone moving with a uniform or variable speed?

(ii)Is the stone moving with a uniform acceleration? In which direction does the acceleration act?

(iii)What kind of force acts on the hand and state its direction?

7)What happens to the power if the time for doing work is reduced from  $t$  seconds to  $t/10$  seconds?

8)Illustrate through one example each, the conversion of

(i)electrical energy to mechanical energy

(ii)chemical energy to light energy

9)for what angle between the work and displacement, do we get

(i)minimum work      (ii)maximum work

10)Name the physical quantity which can be measured in terms of electron-volt. Give the relation between electron volt and SI unit of this quantity.

11)Give the definition of the term 'kilowatt-hour'. State its relation with joule, the SI unit of energy.

12)When an arrow is shot from a bow, it has kinetic energy in it. Explain briefly from where does it get its kinetic energy.

13)a body is acted upon by a force. State two conditions under which the work done could be zero.

14)What are the energy changes taking place in the following appliances-loudspeaker, electric heater and a petrol engine.

15)Following are the name of some units-kilowatt, kilowatt-hour,light year, hertz, electron volt and horse power. Give the name of physical quantities for which these are used.

16)Two men move from a ground floor of a building to its fourth floor. While the first man used the staircase, the second man used the elevator.Assuming friction to be negligible, compare the work done in two cases.

17)A coolie, carrying load on his head and moving on a frictionless horizontal platform, does no work. Explain the reason why.

18)How is work done by a force measured when the force is:

(i)in the direction of placement?

(ii)at an angle to the direction of placement?

19)(i)Name the physical quantity measured in horse power.

(ii)Explain briefly why the work done by a fielder when he takes a catch in a cricket match is negative.

20)Give a simple drawing example of a class I,II and III lever and label it. Name one practical devices of all class of lever and write their mechanical advantage.

- 21) State four differences between a single fixed pulley and a single movable pulley with the help of a labelled diagram.
- 22) Shears, used for cutting metals, and scissors, used for cutting clothes, are both examples of levers of class I. However, while the shears always have short blades and long handles, the scissors often have blades much longer than the handles. Explain why this is so.
- 23) Draw a labelled diagram of a block and tackle pulley system that has a velocity ratio of 3. Show clearly the points of application and the directions of the load and effort on this labelled diagram.
- 24)(i) Draw a labelled diagram of a "block and tackle" system of pulleys with two pulleys in each block. Indicate the directions of the load, effort and tension in the string.
- (ii) Write down the relation between the load and the effort of the pulley system.
- 25)(i) What is meant by an ideal machine?
- (ii) Write a relationship between the mechanical advantage and velocity ratio of an ideal machine.
- 26) Give the statement of Snell's law of refraction of light.
- 27) Explain briefly the meaning of the statement - the critical angle of diamond is  $24^\circ$ .
- 28) A ray of light is observed to go from medium I to medium II without any change in its direction. Give the relation, if any, between the refractive indices of these media.
- 29) Light can get (i) reflected from a plane mirror (ii) totally internally reflected by the prism. Give one point of difference between the two cases.
- 30) If the wavelength of the light incident on glass is increased, what is likely to happen to the speed of light in glass.
- 31) The refractive index of diamond is 2.42. What is meant by this statement?
- 32) It is well known that water in a pond appears to be only three quarters of its actual depth.
- (i) Name the property of light responsible for this observation.
- (ii) Draw a ray diagram illustrating this phenomenon.
- 33)(i) A monochromatic beam of light of wavelength  $\lambda$  passes from air into a glass block. Write an expression to show the relation between the speed of light in air and the speed of light in glass.
- (ii) As the ray of light passes from air to glass, state how the wavelength of light changes. Does it increase, decrease or remain constant?
- 34)(i) Draw a labelled diagram to illustrate critical angle and total internal reflection, for a ray of light moving from one medium to another.
- (ii) Write a formula to express the relationship between refractive index of the denser medium with respect to rarer medium and its critical angle for that pair of media.
- 35) A ray of light strikes the surface of a rectangular glass block such that the angle of incidence is (i)  $0^\circ$  and (ii)  $42^\circ$ . Sketch a diagram to show the approximate path taken by the ray in each case as it passes through the glass block and emerges from it.

**SUBJECT: PHYSICS**  
**NUMERICAL ASSIGNMENT**

- 1) A force of 2.5N, with the length of its moment arm being 4m, rotates a body in the clockwise direction. Find the torque.
- 2) The man, weighing 80kgf, is sitting at a distance of 1.5m from the centre of a see-saw. Where must a lady, weighing 50kgf, sit of the opposite side of the centre so as to keep the see-saw balanced?
- 3) A light meter scale, kept on a wedge at its centre, has weights of 10gf and 20gf suspended at the 30 cm mark and 20 cm mark respectively. Where must a weight of 50gf be placed so as to balance the meter scale?
- 4) A uniform half metre rule balances horizontally on a knife edge at 29cm mark when a weight of 20gf is suspended from one end.
- (i) Draw a diagram of the arrangement.
- (ii) What is the weight of the half metre rule?
- 5) Compare the kinetic energy of a car of mass  $m$  moving with velocity 80km/hr and a truck of mass  $2m$  moving with velocity 40km/hr.
- 6) A given force displaces an object through a distance  $s$  in its own direction and then in a direction inclined at  $60^\circ$  to its own direction. What is the ratio of work done in two cases?
- 7) A man of mass 70kg, goes up across 20 steps in 21seconds. If each step is 30cm high, What is the power developed by the man?
- 8) It takes 10 minutes for an engine to pump 30000 litres of water to a vertical height of 45 metres. If  $g=9.8\text{m/s}^2$ , find the work done by the engine and its power. (density of water= $1000\text{kg/m}^3$  &  $1000\text{ litre}=1\text{m}^3$ )
- 9) It is observed that an amount of energy, equal to 1.0J, gets spent when an object of mass 0.5 kg is lifted through a height  $h$ . What is the value of  $h$ ?
- 10) A body of mass 5kg is moving with a velocity 10m/s. What will be the ratio of its initial kinetic energy and final kinetic energy, if the mass of the body is doubled and its velocity is halved?
- 11) A boy weighing 40 kgf, climbs up a stair of 30 steps each 20 cm high in 4 minutes and a girl, weighing 30kgf, does the same in 3 minutes. Compare:
- (i) the work done by them
- (ii) the power developed by them
- 12) A long rod of length 100cm has its fulcrum situated at a distance of 10 cm from the load. Calculate the mechanical advantage of the rod.
- 13) The velocity ratio and efficiency of a given pulley system have values of 4 and 90% respectively.
- (i) Find the mechanical advantage of this pulley system.
- (ii) How much effort would be needed to lift a load of 300N using this pulley system?
- 14) A boy uses a single fixed pulley to lift a load of 50 kgf to some height. Another boy uses a single movable pulley to lift the same weight to the same height. Compare the effort applied by them. Give reason to support your answer.
- 15) A block and tackle system has  $VR=5$ .
- (i) Draw a neat labelled diagram of the system indicating the direction of its load and effort.

- (ii) Rohan exerts a pull of 150kgf. What is the maximum load he can raise with this pulley system if its efficiency = 75%?
- 16) A ball initially at rest, is dropped from a height of 5m above the ground. Find the speed with which it hits the ground.
- 17) The bob, of a simple pendulum, has a speed of 4m/s when it is at its mean position. Find the maximum height to which the bob can rise above its mean position.
- 18) The refractive indices of water and glass are  $\frac{4}{3}$  and  $\frac{3}{2}$  respectively. In which of the two does the light travel faster? What is the ratio of speed of light in these two media?
- 19) A glass block has a refractive index of 1.5. Find the velocity of light in the block. (given velocity of light in air =  $3 \times 10^8$  m/s)
- 20) How is the refractive index of a material related to:
- real and apparent depth?
  - velocity of light in vacuum or air and the velocity of light in a given medium.
- 21) State the conditions required for total internal reflection of light to take place.
- 22) The speed of light in glass is  $2 \times 10^5$  km/s. What is the refractive index of glass?
- 23) (i) A ray of light passes from water to air. How does the speed of light change?  
(ii) which colour of light travels fastest in any medium except air?
- 24) (i) The refractive index of glass with respect to air is 1.5. What is the value of the refractive index of air with respect to glass.  
(ii) A ray of light is incident as a normal ray on the surface of separation of two different media. What is the value of the angle of incidence in this case?
- 25) (i) Can the absolute refractive index of a media be less than one.  
(ii) A coin placed at the bottom of a beaker appears to be raised by 4.0cm. If the refractive index of water is  $\frac{4}{3}$ , find the depth of the water in the beaker.

**ASSIGNMENT 1( Ch 1 and 2)**  
**SUBJECT – CHEMISTRY**

**Note: Prepare Ch-1 and Ch-2 for written test**

**Q1. Answer in one word**

- Element with highest Ionization Potential
- Element with highest Electron Affinity
- Element with highest Electronegativity
- Element with highest Metallic Character
- Most stable compound
- The bond formed by complete transfer of electrons
- The bond formed by unequal sharing of electrons
- The bond formed by equal sharing of electrons
- Unshared paired of electrons
- Compound with all three types of bonds

- xi. An Alkaline earth metal present in group two and period three.
- xii. A trivalent used to make light tools.

**Q2. Complete the following:**

- i. Group 1 elements are called \_\_\_\_\_ metals. They \_\_\_\_\_ electrons and form \_\_\_\_\_ charged ions. They are very good \_\_\_\_\_ agents.
- ii. Group 17 elements are called \_\_\_\_\_. They \_\_\_\_\_ electrons and form \_\_\_\_\_ charged ions. They are very good \_\_\_\_\_ agents.
- iii. Horizontal rows are known as \_\_\_\_\_ and vertical columns are called \_\_\_\_\_
- iv. Modern periodic table is based on \_\_\_\_\_
- v. Electrovalent compounds are very good \_\_\_\_\_ of electricity. So they act as \_\_\_\_\_ in their molten or \_\_\_\_\_ state.
- vi. The polar covalent compound in gaseous state that does not conduct electricity is \_\_\_\_\_

**Q3. Name the particles present in**

- i. Dilute Sulphuric acid
- ii. Aqueous solution of ammonia
- iii. Sugar Solution

**Q4. Draw electron dot structure of the following using (.) and (x).**

- I. Sodium Chloride
- II. Magnesium Chloride
- III. Calcium Oxide
- IV. Methane
- V. Water

**Q5. i. When acid is dissolved in water it produces \_\_\_\_\_ ion as the only positively charged ion. Draw its well labeled electron dot structure.**

**ii. Draw the electron dot structure of a non metallic cation formed when ammonia gas dissolves in water.**

**Q 6. Give reasons**

- i. Carbon tetrachloride is a non conductor of electricity.
- ii. The oxidizing power of elements increases on moving from left to right along a period in the periodic table.
- iii. The valency of inert gases is zero.
- iv. An aqueous solution of Sodium Chloride conducts electricity but solid NaCl does not conduct electricity.

**Q 7. An element X belongs to third period and group 2 of the periodic table. State b**

- i. The number of valence electrons
- ii. The Valency
- iii. Name of the element
- iv. Whether it is a metal or a non metal and why?

**Q8. Identify the following:**

- i. Noble gas with three shells.
- ii. Element with maximum metallic character- Na, Li, K

**ASSIGNMENT 2 (Ch- 6 and 7)**  
**SUBJECT – CHEMISTRY**

**Note: Prepare Ch-6 and Ch-7 for written test**

**Q1. Answer in one word**

- i. Main ore of Aluminium.
- ii. Main ore of Iron.
- iii. Sulphide ore of Zinc
- iv. Most abundant metal in earth's crust
- v. Liquid metal at room temperature
- vi. Brittle metal
- vii. Liquid non-metal at room temperature
- viii. Non metal which is good conductor of electricity
- ix. Property of metals to be beaten into thin sheets
- x. Property of metals to be drawn into thin wires

**Q2. Name the process.**

- i. Concentration or Enrichment of Bauxite ore
- ii. Purification of Bauxite ore
- iii. Electrolytic reduction of fused Alumina
- iv. Purification of impure aluminium
- v.

**Q3. Give Reasons for the following:**

- i. Graphite anode is preferred to platinum in the electrolysis of molten Lead Bromide
- ii. Dilute Sulphuric Acid is added in the electrolysis of water
- iii. The article which is to be electroplated is always kept at cathode.
- iv. Reactive metals cannot be extracted from their aqueous salt solutions by electrolysis
- v. Silver Nitrate is a good electrolyte but it cannot be used in silver electroplating.
- vi. The blue colour of aqueous copper sulphate fades when it is electrolyzed using inert electrodes.
- vii. Why the anode needs to be replaced from time to time in Electrolysis of molten Alumina.
- viii. Aluminium is used in Thermite welding.
- ix. Zinc is used in galvanization.
- x. Some metallic oxides can be reduced by conventional reducing agents and some cannot.

**Q 4. Complete the table by choosing the options given below**

**Acetic Acid, Ammonium Chloride, Ammonium Hydroxide, Sugar solution, Muriatic Acid (Dilute), King of Chemicals (Dilute), molten Lead Bromide**

<b>Strong Electrolytes</b>	<b>Weak Electrolytes</b>	<b>Non- Electrolytes</b>

**Q 5. Complete the table**

<b>Electroplating</b>	<b>Electrolyte (name)</b>	<b>Cathode Reaction</b>	<b>Anode Reaction</b>
<b>Silver Electroplating</b>			
<b>Nickel Electroplating</b>			
<b>Electro refining of impure Copper</b>			

**Q 6. Write the role of the following compounds in the extraction of Aluminium.**

- i. Concentrated Caustic Soda solution
- ii. Cryolite
- iii. Fluorspar
- iv. Powered coke

**Q 7. Differentiate between the following.**

- i. Roasting and Calcination
- ii. Hydrolic washing and froth floatation
- iii. Copper wire and copper sulphate solution.
- iv. Strong Electrolyte and Weak Electrolyte

**Q 8. Write down the balanced chemical equation**

- i. Three reactions of Bayer's process.
- ii. Reduction of Zinc oxide by Coke
- iii. Red coloured metallic Oxide is reduced by a poisonous gas
- iv. Reaction of Aluminothermy
- v. Aluminium reacts with black coloured powder.

**What will be the output of the following program snippet?**

**a)**

```
class Test {
public
    static void main(String[] args)
    {
        int i = 0, j = 9;
        do {
            i++;
            if (j-- < i++) {
                break;
            }
        } while (i < 5);
        System.out.println(i + "" + j);
    }
}
```

**b)**

```
class Test {
public
    static void main(String[] args)
    {
        int j = 0;
        do
            for (int i = 0; i++ < 1
                System.out.println(i);
            while (j++ < 2);
        }
    }
}
```

**c)**

```
class Test {
    static String s = "";
public
    static void main(String[] args)
    {
        P:
        for (int i = 2; i < 7; i++) {
            if (i == 3)
                continue;
            if (i == 5)
                break P;
            s = s + i;
        }
        System.out.println(s);
    }
}
```

**d)**

```
class Test {
public
    static void main(String[] args)
    {
        int x = 10;
        if (++x < 10 && (x / 0 > 10)) {
            System.out.println("Bishal");
        } else {
            System.out.println("GEEKS");
        }
    }
}
```

**LT ATUL KATARYA MEMORIAL SCHOOL**  
**SUBJECT: COMPUTER APPLICATIONS**  
**CLASS 10**  
**ASSIGNMENT: 2**

**What will be the output of the following program snippet?**

**a)**

```
public class Prize {
    public static void main(String args[]) {
        int x = 111, y = 101;
        switch (x & y) {
            case 1 :
                System.out.println("-1-");
            case 101 :
                System.out.println("-101-");
            case 111 :
                System.out.println("-111-");
            case 010 :
                System.out.println("-010-");
            default :
                System.out.println("-" + x & y + "-");
        }
    }
}
```

**b)**

```
class WeekDays
{
    public static void main(String s[])
    {
        int day = 7;

        switch(day)
        {
            case 1:
                System.out.println("Monday");
```

```
case 2:
    System.out.println("Tuesday");
case 3:
    System.out.println("Wednesday");
case 4:
    System.out.println("Thursday");
case 5:
    System.out.println("Friday");
}}}
```

c)

```
class Directions
{
    public static void main(String s[])
    {
        char direction = 'N';
        char west = 'W';

        switch(direction)
        {
            case 'N':
                System.out.println("North");
                break;
            case 'E':
                System.out.println("East");
                break;
            case west:
                System.out.println("West");
                break;
            case 'S':
                System.out.println("South");
        }
    }
}
```

## अभ्यास पत्रक

### विषय- हिन्दी

प्रश्न-1 'मातृ मंदिर की ओर' के आधार पर निम्नलिखित प्रश्नों के उत्तर दीजिए-

- (क) कवयित्री का हृदय व्यथित क्यों है ?
- (ख) कवयित्री अपनी व्यथा को दूर करने के लिए क्या करना चाहती है ?
- (ग) मातृ-मंदिर का मार्ग कैसा है ?
- (घ) कवयित्री भगवान से सहायता क्यों माँग रही है ?
- (ङ) 'अहा! वे जगमग-जगमग जगी, ज्योतियाँ दीख रही हैं वहाँ।' पंक्ति का आशय स्पष्ट कीजिए।
- (च) कवयित्री क्यों जल्दी से आगे बढ़ना चाहती है ?
- (छ) कवयित्री माँ को क्या सुनाना चाहती है ?
- (ज) कवयित्री की कहाँ से पुकार हो रही है और क्यों ?
- (झ) 'कलेजा माँ का, मैं संतान करेगी दोषों पर अभिमान।' का आशय स्पष्ट कीजिए।
- (ञ) कवयित्री किस पथ पर बढ़ना चाहती है ?

प्रश्न-2 'चलना हमारा काम है' कविता के आधार पर उत्तर दीजिए-

- (क) कवि ने किस सच्चाई का उल्लेख किया है ?
- (ख) कवि ने बोझ बाँटने का कौन-सा उपाय बताया है ?
- (ग) 'विधाता वाम' का अर्थ स्पष्ट कीजिए। ऐसा हम कब सोचते हैं ?
- (घ) कवि दर-दर क्यों नहीं खड़ा होना चाहता ?
- (ङ) कवि का रास्ता आसानी से कैसे कट गया ?
- (च) कवि ने जीवन को अपूर्ण क्यों बताया है ?
- (छ) शब्दार्थ लिखिए-रोड़ा, निराशा, अभिराम, गति, विशद, अवरुद्ध, वाम, विराम, प्रबल, मंजिल

प्रश्न-3 विलोम शब्द लिखिए-

- |           |          |           |
|-----------|----------|-----------|
| ➤ आकर्षण  | ➤ घात    | ➤ उन्नति  |
| ➤ कृतज्ञ  | ➤ बंधन   | ➤ परकीया  |
| ➤ उर्वर   | ➤ हर्ष   | ➤ ग्रामीण |
| ➤ स्वाधीन | ➤ आगामी  | ➤ सामिष   |
| ➤ उत्तम   | ➤ आधुनिक | ➤ एकांगी  |

प्रश्न-4 पर्यायवाची शब्द लिखिए-

- |            |          |           |
|------------|----------|-----------|
| • अंतरिक्ष | • अपराधी | • अज्ञानी |
| • अटल      | • अमर    | • अमानत   |
| • अनपढ़    | • असभ्य  | • अपेक्षा |

• आश्चर्य

• रचना

• लहर

• लक्ष्य

• योग्यता

प्रश्न-5 संज्ञा-निर्माण कीजिए-

❖ हँसना

❖ स्वस्थ

❖ भागना

❖ मीठा

❖ कठोर

❖ पुरुष

❖ चिकित्सक

❖ निराश

❖ साधु

❖ कहना

❖ पंडित

❖ भूलना

❖ प्रतिनिधि

❖ गिरना

❖ अतिथि

❖ सज्जन

अभ्यास पत्रक-2

विषय- हिन्दी

कक्षा-दसवीं

प्रश्न-1 'बात अठन्नी की' पाठ के आधार पर प्रश्नों के उत्तर दीजिए-

(क) रसीला ने किससे तनख्वाह बढ़ाने की प्रार्थना की और क्यों ?

(ख) रसीला के परिवार की स्थिति का वर्णन कीजिए।

(ग) रसीला की आय बढ़ाने की बात सुनकर जगत सिंह की प्रतिक्रिया थी ?

(घ) रसीला कहीं और क्यों नहीं जाना चाहता था ?

(ङ) रसीला के दुखी होने का कारण क्या था ?

(च) रसीला की सहायता किसने की और उसके प्रति रसीला के क्या विचार थे ?

(छ) रमजान ने जगत सिंह की रिश्तत की बात सुनकर क्या उत्तर दिया ?

(ज) जगतसिंह ने रसीला से क्या मँगवाया ?

(झ) रसीला की गलती पकड़े जाने पर जगतसिंह ने उसके साथ कैसा व्यवहार किया ?

(ञ) रसीला क्या कहकर अपने आपको बचा सकता था ?

(ट) रसीला का मुकद्दमा किसकी अदालत में पहुँचा ? उनका परिचय दीजिए।

(ठ) निर्णय सुनकर किसकी आँखों में खून उतर आया ?

(ड) पाठ का उद्देश्य लिखिए।

(ण) शीर्षक की सार्थकता स्पष्ट कीजिए।

प्रश्न-2 'काकी' पाठ पर आधारित प्रश्नों के उत्तर लिखिए-

- (क) श्यामू का परिचय दीजिए।
- (ख) श्यामू ने सवेरे उठते ही क्या देखा ?
- (ग) बुद्धिमान लोगों ने श्यामू को क्या समझाया ?
- (घ) श्यामू को वास्तविकता का पता कैसे लगा ?
- (ङ) श्यामू की उदासी के बारे में बताइए।
- (च) पतंग मँगवाने के लिए श्यामू का पहला क्या प्रयास था ?
- (छ) श्यामू के मित्र की समझदारी का वर्णन कीजिए।
- (ज) श्यामू ने दूसरी बार पतंग का प्रबंध कैसे किया ?
- (झ) विश्वेश्वर कौन थे ? उनकी उग्रता का कारण लिखिए।
- (ञ) विश्वेश्वर ने श्यामू के साथ कैसा व्यवहार किया ?
- (ट) विश्वेश्वर की मनोदशा का कारण लिखिए।
- (ठ) इस पाठ से क्या संदेश मिलता है ?

❖ व्याकरण पर आधारित प्रश्नोत्तर-

प्रश्न-3 विशेषण-निर्माण कीजिए-

- स्वर्ग
- अभियोग
- पीड़ा
- चार
- वन
- विश्वास
- ज्योति
- हित

प्रश्न-4 निम्नलिखित मुहावरों से वाक्य-निर्माण कीजिए-

- (क) ख्याली पुलाव पकाना
- (ख) गेहूँ के साथ घुन पिसना
- (ग) एक हाथ से ताली न बजना
- (घ) रंगा सियार
- (ङ) उल्टी गंगा बहाना
- (च) घुटने टेक देना
- (छ) आटे में नमक

**Note:**

- Students will be suitably graded for all the home assignments.
- All the home assignments should be done on the ruled sheet.