



**Arsh Vidya Kendra ,
Gurugram**

Summer

Holiday

Homework

Grade - X

Enjoy

Your

Vacations

General Instructions:-

- **Every subject holiday homework do in separate notebook.**
- **Do neat and clean work.**

Subject – English

- 1) You are Hema/Hemant, 14/9, Hill Apartments, Jaipur. You are not satisfied with the facilities for tourists in Jaipur. Write a letter in 100-150 words to the editor of a local daily giving suggestions on ways to improve the facilities for tourists.
- 2) There is a busy road in front of your school. A large number of students have to cross the road while going back home. They run a great risk. Write a letter to the Editor, Navjivan Times, Agra drawing attention of the concerned authorities to the problem. Make a request to mark a zebra crossing and to put traffic lights in front of your school. You are Amit/Anita, Class X, New Age Public School, Ram Nagar, Agra.
- 3) In our country thousands of lives are lost due to chikungunya and dengue. It is due to a lack of awareness among the people. Write a letter in 100-150 words to the editor of a national newspaper expressing your views on the problem and offering your suggestions to correct it. Sign yourself as Honey/Bunny of 121, Sarojini Nagar.

Letter of Placing Order

- 4) You are Arjun/Aditi Mishra of G/43, Satyawati Colony, Delhi. You have a birthday party at home on the coming weekend. The food is to be outsourced from a caterer. Place an order for a 3-kg vanilla cake with birthday greetings, 2 dozen strawberry pastries, 15 cheese sandwiches and 30 burgers and patties each, with your local bakery.
- 5) You are Neena/Naveen Arora, Head Girl/Boy of Aster Public School, Jaipur. Write a letter to the Manager of New Star Sports Company, Kalkaji, New Delhi, asking him to send more popular sports material for your games and sports department. Mention the quantity and fix a deadline for supply.
- 6) You are Ruhi/Rohan Kapoor, student in charge of organising a picnic for 120 students. Write a letter to M/s Deepak Provision Stores, Amar Colony, New Delhi, placing an order for disposable plates, cups, spoons, forks and glasses.

Letter of Enquiry

- 7) You are Ram/Reeta, P.E.T., ABC Public School, Jammu. You have read an advertisement in a newspaper by National Tourist Corporation offering reduction of fares for group tours. Write a letter in 100-150 words to enquire about the following:
 - Reduction allowed/offered
 - Any additional reduction on two-way tickets
 - Minimum number of passengers in one tour
 - Destinations being offered
 - Time-slot
- 8) You are Neeta/UKP Kumar of 11, Sangam Vihar, Delhi. You wish to find out more about the tutorials offered by MahaGuru Coaching classes for your son for the engineering entrance examinations. Write a letter, in 100 to 150 words, to the Director of this institute, seeking their track record and past success rate, fees structure, duration of course and timings.
- 9) You are Sangeeta/Rishi Kapoor of D-367, MIG Flats, Sidhartha Extension, New Delhi. You wish to buy a new 42-inch television and are unable to decide between two brands, XX and YY. Write a letter, in about 100 to 150 words, to the Manager of ABC Electronics Mart, seeking information on both the brands in a comparative format to arrive at a decision.

10) Read the following passage carefully:-

Selfie is the latest fad among people, especially the younger generation. Whether you are at the railway station, at a restaurant, in the park or any other place, you would come across youngsters clicking pictures of themselves, which are more commonly known as 'selfies'. Though these selfies are good for a person's Facebook post, there have been several instances where selfie-obsessed youngsters have severely injured themselves or even met

their death while trying to take a selfie. Oblivious of the surroundings, people have fallen to their death or have been run over by vehicles while in the process of taking a selfie. Some individuals have even gone a step ahead and attempted to take selfie at dangerous places or in difficult positions, thereby meeting a gory end.

In fact, such is the craze for selfies in India and the accident rate is so high that a new research has stated that India has the highest number of selfie related deaths in the world. The study maintained that from March 2014 to September 2016, a whopping 60 per cent of the selfie deaths took place in India. The study, which has been titled "Me, Myself and My Killfie: Characterising and Preventing Selfie Deaths", has estimated that of the 127 selfie deaths that took place across the globe, 76 occurred in India. In contrast, Pakistan reported just 9 deaths while both the US and Russia witnessed 8 and 6 deaths respectively. The authors of the study hope that their study will serve as a warning for the people and would inspire new technology that could warn selfie-takers when they are in risky zones.

In fact, it is young men who are more prone to undertake dangerous selfies. The report has analysed a large number of selfies posted on Twitter and come to the conclusion that 13 per cent of these were taken in dangerous situations. Alarmingly, a majority of these were young people falling under the age of 24. While in the world most people had selfie related deaths by falling off high buildings and mountain cliffs, in India most such deaths have been water-related or near railway tracks.

Taking selfies is not wrong, but it is imperative to be aware of the surroundings. Selfies should be avoided in dangerous places, for it is always better to be safe than sorry.

On the basis of your reading of the passage, answer the following questions in about 30-40 words each.

- a) What do the researchers of selfie related deaths hope for?
- b) What is the precaution to be taken while taking selfies?
- c) What are the findings of the new research on 'selfies'?
- d) Describe the term 'selfie-obsessed youngsters' as mentioned in the passage.

11) Read the following passage carefully:-

Do you know do some people don't do their reading assignments? It's shocking, but it's true. Some students don't even read short texts that are assigned to them in class. There are many reasons for this. They may be distracted or bored. They may be unwilling to focus. They may be unconfident readers. Whatever the reason, it needs to be stopped. Here's why Reading stimulates your mind. It is like a workout for your brain. When people get old, their muscles begin to deteriorate. They become weaker and their vitality starts ebbing. Physical exercise can prevent this loss. The same thing happens to people's brains when they get older Brain power and speed decline with age. Reading strengthens your brain and prevents the decline.

Reading has many other benefits too. Reading provides knowledge and knowledge is power. Therefore, reading can make you a more powerful person. There are many new things you can learn to do by reading. Do you want to make video games? Do you want to design clothes? Reading can teach you all this and much more. You have to develop the habit of reading and the only way to get good at something is to practise. Read everything that you can at school, regardless of whether you find it interesting. Reading expands your vocabulary. Even a boring text can teach you new words. Having a good vocabulary will help you express yourself better. You will be able to speak, write and think more intelligently. What's boring about that? Reading has a calming effect on your mind. It can lower your stress levels and help you relax. You can escape from your troubles for a moment when you read, and it's a positive escape. So do yourself a favour: the next time you get a reading assignment, read it and enjoy it thoroughly Squeeze it for every drop of knowledge that it contains. Then move on to the next one.

On the basis of your reading of the passage, answer the following questions in about 30-40 words each.

- a) Why does the author think that reading is good for health?
- b) Why does the author believe that reading makes a person powerful?
- c) How can reading a boring text enhance your knowledge?
- d) Why does the author describe reading as a 'positive escape'? In what ways is reading positive?

12) Read the following passage carefully:-

Many are familiar with Nobel Laureate Rabindranath Tagore's literary works and songs. One may well ask: is there a central theme in Tagore's works? There is a central theme, and that is his love of freedom and non-conformity, which is evident in his works. Apart from being a literary genius, have you ever wondered what else did he love? Have you ever thought of tasting the bard's favourite dishes?

Now Kolkata can boast of a cafeteria-cum-restaurant, 'Cafe The', where people can get a taste of Tagore's culinary indulgences all under one roof. It was conceived by Rathikant Basu, who undertook a lot of research to make it a reality. The restaurant is located on Ho Chi Min Sarani in south Kolkata and is the first cafeteria-cum-restaurant in India that is exclusively dedicated to Tagore cuisine.

Tagore would encourage the 'Thakurs' (cooks) in his ancestral palace in the northern part of the city to introduce variations in the platter by including local versions of Continental and Peshawari cuisine. Thus, the crossover culture, ensconced silently in the kitchens of 'Thakurbari', was launched, much before the clamour for cross-cultural cuisine actually started. The poet's innate wanderlust took him to places like Italy, Spain, England, Turkey, etc, and he imbibed the food traditions of these countries. Since he was exposed to both oriental and occidental cuisine, a penchant to blend the two forms came naturally.

There are not many documents to support that Tagore was a die-hard food lover. But he actually was one and whenever he attended a lunch or dinner abroad, he used to collect and bring back the menu cards.

On the basis of your reading of the passage, answer the following questions in about 30-40 words each.

- a) What do you understand by 'cross-cultural cuisine'?
- b) What was the purpose of the dinner party hosted by The India Society?
- c) What was the underlying theme of Tagore's works?
- d) How has Rathikant Basu paid a tribute to Tagore?

13) Read the following passage carefully:-

Saving wild animals from extinction has, for many years, been a problem for zoologists and wildlife conservationists. In the last two decades, the problem has become acute, and has received so much publicity, that most people are aware and now concerned about it. This may, at first, seem strange because one of the most gratifying developments in the last few years has been the of sport. Why is it then, that so wild animals and consequent decline in hunting as a big game of the less rare ones are rapidly die wild animals are still threatening as a and some of the less rare ones are declining in One reason towns or factory sites for hydroben an area is wholly cleared of vegetation to make room for new the displaced animals must reelectric plants, the natural home getation to make rodestroyed. The animals must either migrate to another area of penstral species dearing of land for construction of roads or an airfield may involve pushing back then the and the smaller the area in which wild animals compete for a living, the smaller the number jungle can hope to survive, Many wonderful species of plants and animals have been lost and many others remain endangered. More than 80% of the world's species remain in the tropical rainforest. It is estimated that about 50 to 100 species of animals are lost each day as a result of destruction of their habitats. Many beautiful creatures have vanished from the face of the earth, and that is a tragedy. 4. Civilisation brings, too, swift and easy transport and so assists those who are determined to break various pro-conservation laws. Thieves can elude the wardens, shoot an elephant for its tusks, a rhinoceros for its horn, or a deer for its meat, and be miles away from the site of the crime

before the dead or dying victim is even discovered. 5. It is sad that civilisation that has facilitated so many people who have previously known only hunger and misery has also been responsible for aiding heartless criminals who, for their personal material gain slaughter harmless animals. This also threatens the disappearance of some species from the earth forever.

On the basis of your reading of the passage, answer the following questions in about 30-40 words each.

- a) This may at first seem strange. What does the word 'This' refer to here? Why does the author think that 'This' may seem strange?
- b) What does the author mean by 'march of civilisation'?
- c) How does modern transport threaten the survival of wild animals?
- d) What is the sad reflection that the author makes in the last Paragraph of the passage?

14) Read the following passage carefully:-

During our growing up years we as children were taught-both at home and school-to worship the photos and idols of the gods of our respective religions. When we grow a little older, we were to read holy books like The Bhagwad Gita, Bible and Quran, we were told that there are a lot of life lessons to be learnt from these holy books. We were then introduced to stories from our mythologies which taught us about ethics and morality-what is good and what is bad. I also learnt to be respectful towards my parents who made my life comfortable with their hard work and love and care, and my teachers who guided me to become a good student and a responsible citizen. Much later in life, I realised that though we learn much from our respective holy books, there is a lot to learn from our surroundings. This realisation dawned upon me when I learnt to enquire and explore. Everything around us-the sun, the moon, the stars, rain, rivers, stones, rocks, birds, plants and animals-teach us many valuable life lessons. No wonder that besides the scriptures in many cultures nature is also worshipped. The message that we get is to save our environment and maintain ecological balance. People are taught to live in harmony with nature and recognise that there is God in all aspects of nature. Nature is a great teacher. A river never stops flowing. If it finds an obstacle in its way in the form of a heavy rock, the river water fights to remove it from its path or finds an alternative path to move ahead. This teaches us to be progressive in life, and keep the fighting spirit alive. Snakes are worshipped as they eat insects in the field that can hurt our crops, thus protecting the grains for us. In fact, whatever we worship is our helper and makes our lives easy for us. There are many such examples in nature, but we are not ready to learn a lesson. Overcome with greed, we are destroying nature. As a result we face natural disasters like drought, flood and landslides. We don't know that nature is angry with us. However, it is never too late to learn, If we learn to respect nature the quality of our life will improve.

On the basis of your reading of the passage, answer the following questions in about 30-40 words each.

- a) What are we taught in our childhood and growing up years?
- b) Why should we respect our parents and teachers?
- c) What message do we get when we worship nature?
- d) How does a river face an obstacle that comes in its way?

Subject – Social Studies

- 1) Students were given two condition.
 - a) In a democracy all power does not rest with any one organs of a state.
 - b) An intelligent distribution of power among legislature ,executive and judiciary is very important.What idea of power put forward to students?
 - a) Monarchy
 - b) Majoritarianism
 - c) Power sharing
 - d) None of these
- 2) In Belgium there was tension between French speaking and Dutch speaking communities Because in Belgium:
 - a) Dutch are 59% and French were 40% and German are 1%.
 - b) French were relatively rich and powerful.
 - c) In Capital Brussels French speaking were 80% and Dutch speaking were 20%.What do you think about the causes of tension?
 - a) Only i is true.
 - b) Only ii is true.
 - c) Only iii is true.
 - d) All i , ii and iii are true.
- 3) Power sharing is good because it helps to reduce the possibility of conflict among social groups.This is an example of which reason of the power sharing?
 - a) Prudential.
 - b) Moral.
 - c) Both A and B
 - d) None of these
- 4) Find the important reason of power sharing from the following options:
 - a) Improves ethnic –cultural development.
 - b) Reduces socio-economic conflicts.
 - c) Allows people to enjoy specific rights.
 - d) Restricts supremacy of one party.
- 5) Consider the following statements regarding power sharing arrangements in Belgium and identify the incorrect one from the following:
 - a) Equal number of members from Dutch and French community in the central government
 - b) Separate government for Brussels with equal representation of communities
 - c) The state government to be subordinate to the central government
 - d) Community government elected by people belonging to one language community
- 6) Which of the following statements accurately distinguishes between Majoritarianism and Power sharing?
 - a) Majoritarianism emphasizes the dominance of the majority community, while Power sharing emphasizes the sharing of power among different groups.
 - b) Majoritarianism emphasizes the need for consensus building, while Power sharing emphasizes the exclusion of minority groups.
 - c) Majoritarianism emphasizes the importance of accommodating minority interests, while Power sharing emphasizes the need for majority rule.
 - d) Majoritarianism emphasizes the need for peaceful resolution of conflicts, while Power sharing emphasizes the use of force to impose the majority's will.
- 7) Identify the community:
 - A. They do not speak French or German.
 - B. They are concentrated in the Flemish Region.
 - C. They form a majority in Belgium.
 - a) British

- b) Sinhala
 - c) Dutch
 - d) None of these.
- 8) Identify the form of power sharing:
- A. The power sharing arrangement between different organs of the government at same level.
 - B. It is practised in India, like executive, legislative and judiciary..
 - a) Horizontal
 - b) Vertical
- 9) Assertion (A) Majority community is dominant in a few democratic country.
Reason (R) Dominance can destroy the unity of the country.
- a) Both (A) and (R) are true but (R) is the correct explanation of (A).
 - b) Both (A) and (R) are true but (R) is not the correct explanation of (A).
 - c) (A) is correct but (R) is wrong.
 - d) (A) is wrong but (R) is correct.
- 10) i. French were relatively rich and powerful.
ii. In Capital Brussels French speaking were 80% and Dutch speaking were 20%.
What do you think about the causes of tension?
- a) Only i is true.
 - b) Only ii is true.
 - c) Only iii is true.
 - d) All i , ii and iii are true.
- 11) Power shared between Central and State Government to local Governments.
- A. It is called as third tire of the Government.
 - B. The state Governments are required to share some powers and revenue with them.
- Select the appropriate option from the following.
- a) Federal system
 - b) Unitary federal system
 - c) Decentralised system
 - d) Unitary system
- 12) Which of the following is the majority group in Sri Lanka ?
- a) Tamil
 - b) Christians
 - c) Sinhalese
 - d) Muslim
- 13) Which one of the following statements about power sharing arrangement is correct?
- a) Power sharing is necessary only in societies which have religious, linguistic or ethnic divisions.
 - b) Power sharing is suitable only for big countries that have regional division
 - c) Every society needs some form of power sharing even if it is small or does not have social divisions.
 - d) Power sharing is not necessary at all.
- 14) Which of the following is an example of horizontal distribution of power?
- a) Power sharing between different states
 - b) Power sharing between different organs of the government
 - c) Power sharing between different levels of the government
 - d) Power sharing between different social groups.
- 15) In dealing with power sharing, which one of the following statements is NOT correct about democracy?
- a) People are the source of all political power.
 - b) In a democracy, people rule themselves through institution of self-governance.
 - c) In a democracy, due respect is given to divers groups and view that exist in a society.

- d) In a democracy, if the power to decide is dispersed, it is not possible to take quick decision and enforce them
- 16) How did the leaders of Sri Lanka deal with the question of power sharing?
- The government adopted series of majoritarian measures to establish Sinhala supremacy in Sri Lanka
 - The government denied equal political rights.
 - The government adopted equality in power sharing.
 - None of those
- 17) Which of the following statements is incorrect?
- In a democracy, all important decisions are taken by the majority community.
 - In a democracy, people rule themselves through the institution of self-government.
 - Political power is distributed in a democracy.
 - In a democratic country, respect is given to various diverse groups.
- 18) How does the judiciary act as an umpire in a federal nation?
- The government adopted series of majoritarian measures to establish Sinhala supremacy in Sri Lanka
 - The government denied equal political rights.
 - The government adopted equality in power sharing.
 - None of those
- 19) Which of the following statements is incorrect?
- In a democracy, all important decisions are taken by the majority community.
 - In a democracy, people rule themselves through the institution of self-government.
 - Political power is distributed in a democracy.
 - In a democratic country, respect is given to various diverse groups.
- 20) How does the judiciary act as an umpire in a federal nation?
- Judiciary rules over centre and state.
 - Centre and judiciary work collectively
 - Courts can change structure of constitution
 - Courts use the power to interpret the constitution
- 21) Consider the following statements on power sharing and select the answer
- using the codes given below:
 - It is good for democracy
 - It creates harmony in different groups
 - It brings transparency in the governance
- It brings socio-political competition among parties Options
- I, II, & III
 - II, III, & IV
 - I, III & IV
 - I, II & IV
- 22) In democratic countries power is shared among governments at different levels. Which power sharing ensures in this situation?
- Horizontal Distribution
 - Vertical Distribution
 - Slant Distribution
 - None of the Above
- 23) In a country power sharing is desirable, not mandatory, because it
- Helps the people of different communities to celebrate their festivals.
 - Imposes the will of the majority community over others.
 - Reduces the conflict between social groups.
 - Ensures the stability of political order.
- 24) In democratic countries when power is shared among different organs of the

government Which power sharing ensures in this situation?

- a) horizontal distribution of power
- b) community distribution of power
- c) coalition of power
- d) federal distribution of power

25) India and Belgium are a democratic country there are some features are common to Indian and Belgian form of power- sharing arrangements?

- A. Power is shared among governments at different levels.
 - B. Power is shared among different organs of government.
 - C. Power is shared among different social groups.
 - D. Power is shared among different parties and takes the form of competition.
- b) A, B, C, D
 - c) B, C and D
 - d) A and C
 - e) A, C and D

26) Two statements are given in the question below as Assertion (A) and Reasoning (R). Read the statements and choose the appropriate option. Assertion (A): Sri Lanka adopted Sinhala as the only official language of the state.

27) Reason (R): The government of Sri Lanka wanted to foster their culture, language and religion.

- a) Both A and R are true, and R is the correct explanation of A.
- b) Both A and R are true, but R is not the correct explanation of A.
- c) A is true but R is false.
- d) A is false but R is true

28) Two statements are given in the question below as Assertion (A) and Reasoning (R).

Assertion : French speaking community in Belgium was rich and powerful.

Reason : Belgian Government favoured French speaking community.

- a) Both A and R are true, and R is the correct explanation of A.
- b) Both A and R are true, but R is not the correct explanation of A.
- c) A is true but R is false.
- d) A is false but R is true

29) Two statements are given in the question below as Assertion (A) and Reasoning (R).

Assertion : Belgium and Sri Lanka both faced ethical tension among different communities.

Reason : Both the countries resolved the conflict by power sharing arrangement which gave equal representation to all the communities.

- a) Both A and R are true, and R is the correct explanation of A.
- b) Both A and R are true, but R is not the correct explanation of A.
- c) A is true but R is false.
- d) A is false but R is true

30) Two statements are given in the question below as Assertion (A) and Reasoning (R).

Assertion : Community government in Belgium is elected by one language community.

Reason : Community government helped in resolving conflict between different linguistic groups.

- a) Both A and R are true, and R is the correct explanation of A.
- b) Both A and R are true, but R is not the correct explanation of A.
- c) A is true but R is false.
- d) A is false but R is true

31) Power sharing is desirable and reduces possibilities of conflict within the country.

- a) true
- b) false

32) Find the incorrect options from the following:

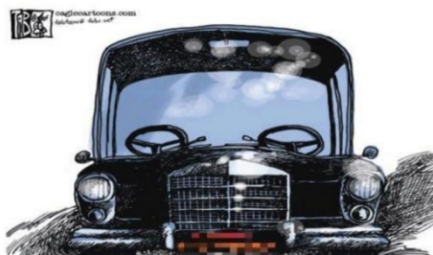
- a) Belgium is a big country in North America.

- b) It has borders with France, The Netherlands, Germany and Luxembourg
 - c) It has a population of a little over one crore
 - d) The ethnic composition of this small country is very complex.
- 33) A war-like conflict between two opposite groups in a country is called
- a) Cold war
 - b) Civil war
 - c) Ethnic war
 - d) None of these
- 34) A belief that the majority community should be able to rule a country in whichever way it wants, by disregarding the wishes and needs of the minority is:
- a) Power Sharing
 - b) Central Government
 - c) Majoritarianism
 - d) Community Governmen

Case Based Questions

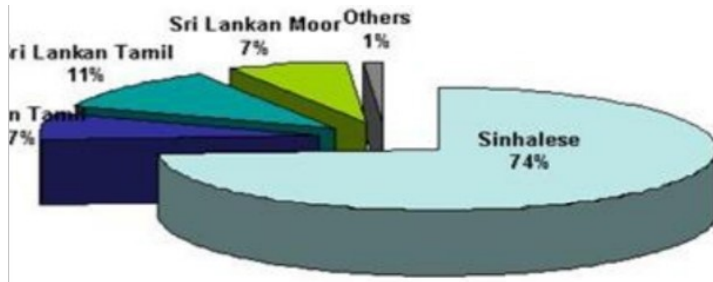
- 35) Belgium is a small country in Europe, smaller in area than the state of Haryana. It has borders with France, the Netherlands, Germany and Luxembourg. It has a population of a little over one crore, about half the population of Haryana. The ETHNIC composition of this small country is very complex. Of the country's total population, 59 per cent lives in the Flemish region and speaks Dutch language. Another 40 per cent people live in the Wallonia region and speak French. Remaining one per cent of the Belgians speak German. In the capital city Brussels, 80 per cent people speak French while 20 per cent are Dutch speaking.
- a) Where is Belgium is located?
 - b) Name the countries bordering with Belgium.
 - c) Why do you think the ethnic composition of Belgium is complex?
 - d) Compare the country Belgium with the Indian state of Haryana.
- 36) Sri Lanka emerged as an independent country in 1948. The leaders of the Sinhala community sought to secure dominance over government by virtue of their majority. As a result, the democratically elected government adopted a series of MAJORITARIAN measures to establish Sinhala supremacy. In 1956, an Act was passed to recognize Sinhala as the only official language, thus disregarding Tamil. The governments followed preferential policies that favoured Sinhala applicants for university positions and government jobs. A new constitution stipulated that the state shall protect and foster Buddhism.
- a) When was Srilanka became independent?
 - b) Who were the majority community of Srilanka?
 - c) Which rule recognizes Sinhala as the only official language of Srilanka?
 - d) How the government of Srilanka adopted preferential policies for Sinhala?
- 37) The idea of power-sharing has emerged in opposition to the notions of undivided political power. For a long time it was believed that all power of a government must reside in one person or group of persons located at one place. It was felt that if the power to decide is dispersed, it would not be possible to take quick decisions and to enforce them. But these notions have changed with the emergence of democracy. One basic principle of democracy is that people are the source of all political power. In a democracy, people rule themselves through institutions of self-government. In a good democratic government, due respect is given to diverse groups and views that exist in a society. Everyone has a voice in the shaping of public policies. Therefore, it follows that in a democracy political power should be distributed among as many as possible.
- a) How the idea of power sharing emerged?
 - b) What was the long time belief about the powers of a government?
 - c) What benefit a government get if power is dispersed among people?

- d) What should be done in a good democratic government?
- 38) The Sri Lankan Tamils launched parties and struggles for the recognition of Tamil as an official language, for regional autonomy and equality of opportunity in securing education and jobs. But their demand for more autonomy to provinces populated by the Tamils was repeatedly denied. By 1980s several political organisations were formed demanding an independent Tamil Eelam (state) in northern and eastern parts of Sri Lanka.
- Why was there dissatisfaction among Sri Lankan Tamils?
 - What were the steps taken by the government of Sri Lanka to alienate Tamils?
 - Which areas of Sri Lanka had the majority of Sinhals?
 - What were the main demands of Tamil.
- 39) This sharing of power between the Union Government and the State governments is basic to the structure of the Constitution. It is not easy to make changes to this power sharing arrangement. The Parliament cannot on its own change this arrangement. Any change to it has to be first passed by both the Houses of Parliament with at least two-thirds majority. Then it has to be ratified by the legislatures of at least half of the total States. The judiciary plays an important role in overseeing the implementation of constitutional provisions and procedures. In case of any dispute about the division of powers, the High Courts and the Supreme Court make a decision. The Union and State governments have the power to raise resources by levying taxes in order to carry on the government and the responsibilities assigned to each of them.
- Why was the Supreme Court given the power to resolve disputes between the states?
 - What is the prerequisite to amend the power sharing arrangement according to the Indian Constitution?
 - Can power sharing arrangement in the constitution be amended by the state government of Odisha?
- 40) Constitutional provisions are necessary for the success of federalism but these are not sufficient. If the federal experiment has succeeded in India, it is not merely because of the clearly laid out constitutional provisions. The real success of federalism in India can be attributed to the nature of democratic politics in our country. This ensured that the spirit of federalism, respect for diversity and desire for living together became shared ideals in our country.
- Let us look at some of the major ways in which this happened. The creation of linguistic States was the first and a major test for democratic politics in our country. If you look at the political map of India when it began its journey as a democracy in 1947 and that of 2019, you will be surprised by the extent of the changes.
- How has democratic politics been tested our country?
 - Mention an objective of the Indian federal government.
 - Why are constitutional provisions necessary for federalism?
- 41) _____ in Belgium is good example of power sharing among different social groups.
- Community government
 - District government
 - Central government
 - State government
- 42) Which of the following option best signifies this cartoon?



- a) Problems of two party system
- b) A car with two steering
- c) Problems of a coalition government
- d) None of the above

43) Which major social group constituted the largest share in population of Srilanka?



- a) Sinhals
- b) Sri Lankan Tamils
- c) Indian Tamils
- d) Muslims

Subject – Computer

Project	Roll no. - 1 to 7 Make a project in HTML on Cyber Safety with minimum 5 – 6 web pages. Save the same in pen drive.
	Roll no. - 8 to 13 Make a project in HTML on Artificial Intelligence with minimum 5 – 6 web pages. Save the same in pen drive.
	Roll no. - 14 to 19 Make a project in HTML on Information Technology with minimum 5 – 6 web pages. Save the same in pen drive.
	Learn the Unit – 2 HTML full for FA – 2. Complete the worksheet that is attached given below:

- 1) Define the term HTML.
- 2) What is an ordered list?
- 3) Differentiate between Container Tag and Empty Tag.
- 4) What are self closing tags?
- 5) Write the code of the following MENU:

Dishes	
1. Punjabi	
◦ Veg. Muglai	
◦ Veg. Tawa Masala	
◦ Paneer Tikka Masala	
◦ Paneer Makhnwala	
◦ Paneer Pasanda	
2. Chinese	
◦ American Copsuey	
◦ Veg. Hakka Noodels	
◦ Veg. Shezwan Rice	
◦ Veg. Fried Rice	
◦ Veg. Triple Rice	
3. Soups	
◦ Sweet Corn Soup	
◦ Veg. Manchow Soup	
◦ Tomato soup	
◦ Hot n Saur Soup	
◦ Palak Soup	

Subject – Maths

- 1) Prove that $3 + 2\sqrt{5}$ is irrational.
- 2) Find HCF and LCM of 404 and 96 and verify that $\text{HCF} \times \text{LCM} = \text{Product of the two given numbers}$.
- 3) Find the quadratic polynomial if its zeroes are $0, \sqrt{5}$.
- 4) Compute the zeroes of the polynomial $4x^2 - 4x - 8$. Also, establish a relationship between the zeroes and coefficients.
- 5) Find the value of k for which the following pair of linear equations have infinitely many solutions. $2x + 3y = 7, (k + 1)x + (2k - 1)y = 4k + 1$
- 6) Solve the following pair of linear equations using elimination method.
 $x - y + 1 = 0; 4x + 3y - 10 = 0$
- 7) In a two digit number, the ten's digit number is three times the unit's digit. When the number is decreased by 54, the digits are reversed. Find the number.
- 8) When the son will be as old as what his father is today their ages will add upto 126 years. When the father was as old as what his son is today, their ages added upto 38 years. Find their present ages.
- 9) Seven times a two digit number is equal to four times the number obtained by reversing the order of the digits. If the difference of the digits is 3, determine the number.
- 10) A man travel 370 km partly by train and partly by car. If he covers 250 km by train and the rest by car, it takes him 4 hours. But, if he travels 130 km by train and the rest by car, he takes 18 minutes longer. Find the speed of the train and that of the car.
- 11) How many two digits numbers are divisible by 3?
- 12) Find how many integers between 200 and 500 are divisible by 8.
- 13) Which term of the A.P.: 3, 15, 27, 39, will be 120 more than its 21st term?
- 14) The first and last term of an AP are 5 and 45 respectively. If the sum of all its terms is 400, find its common difference.
- 15) If the sum of first 7 terms of an A.P. is 49 and that of its first 17 terms is 289, find the sum of first n terms of the A.P.
- 16) If the ratio of the sum of first n terms of two A.P/s is $(7n + 1):(4n + 27)$, find the ratio of their m th terms.
- 17) The sum of first 16 terms of an AP is 112 and sum of its next fourteen terms is 518. Find the AP.
- 18) The first term of an A.P. is 3, the last term is 83 and the sum of all its terms is 903. Find the number of terms and the common difference of the A.P.
- 19) Ramkali saved Rs 5 in the first week of a year and then increased her weekly saving by Rs 1.75. If in the n th week, her weekly savings become Rs 20.75, find n .
- 20) The houses of a row are numbered consecutively from 1 to 49. Show that there is a value of x such that the sum of the numbers of the houses preceding the house numbered x is equal to the sum of the numbers of the houses following it. Find this value of x .
- 21) Find the fourth vertex of parallelogram ABCD whose three vertices are $A(-2, 3), B(6, 7)$ and $C(8, 3)$.
- 22) Find the ratio in which y -axis divides the line segment joining the points $A(5, -6)$ and $B(-1, -4)$. Also find the coordinates of the point of division.
- 23) Let P and Q be the points of trisection of the line segment joining the points $A(2, -2)$ and $B(-7, 4)$ such that P is nearer to A . Find the coordinates of P and Q .
- 24) For what value of k are the points $(1, 1), (3, k)$ and $(-1, 4)$ collinear?
- 25) Find the ratio in which $P(4, m)$ divides the line segment joining the points $A(2, 3)$ and $B(6, -3)$. Hence find m .
- 26) Prove that the points $(3, 0), (6, 4)$ and $(-1, 3)$ are the vertices of a right angled isosceles triangle.
- 27) Find a relation between x and y such that the point (x, y) is equidistant from the points $(7, 1)$ and $(3, 5)$.

- 28) Find the ratio in which the line segment joining the points $(-3, 10)$ and $(6, -8)$ is divided by $(-1, 6)$.
- 29) If the point $C(-1, 2)$ divides internally the line segment joining $A(2, 5)$ and $B(x, y)$ in the ratio $3 : 4$, find the coordinates of B .
- 30) Find the ratio in which the line $x - 3y = 0$ divides the line segment joining the points $(-2, -5)$ and $(6, 3)$. Find the coordinates of the point of intersection.
- 31) Two dice are thrown at the same time. Find the probability of getting
- the same number on both dice.
 - different numbers on both dice.
- 32) One card is drawn from a well-shuffled deck of 52 cards. Calculate the probability that the card will
- be an ace,
 - not be an ace.
- 33) A coin is tossed two times. Find the probability of getting at most one head.
- 34) A die is thrown twice. What is the probability that
- 5 will not come up either time?
 - 5 will come up at least once?
- 35) A card is selected at random from a deck of 52 cards. Find the probability that the selected card is red face card.
- 36) A train moving at speed of 80 km/hr crosses a pole in 7 seconds. Find the length of the train.
- 37) Worker A completes a task in 8 days and worker B completes the same task in 10 days. If both A and B work together, in how many days they will complete the task?
- 38) A can do a work in 10 days and B can do the same work in 15 days. If they start working together but stop working after four days, find the fraction of the work that is left.
- 39) A can do a job in 12 days and B can do the same job in 10 days. With the help of C they can do the same job in 4 days. In how many days C alone can do this job?
- 40) A train moving at 50 km/hr crosses a bridge in 45 seconds. The length of train is 150 meters. Find the length of the bridge.
- 41) A train is moving at 120 km/hr. The length of the train is 150 meters. How long it will take to cross a platform of length 100 meters?
- 42) A train of length 400 meters is running at a speed of 98 km/hr. The train takes 40 seconds to cross a tunnel. Find the length of the tunnel.
- 43) A man is running at 10 km/hr in a parallel track in the same direction of a train which is moving at 55 km/hr. He is 260 meters ahead of the train. If the length of train is 140 meters, in what time the train will cross the man?
- 44) What is the unit digit in the product of $853 * 1346 * 452 * 226$?
- 45) What is the sum of all odd numbers up to 240?
- 46) The rules for sudoku are simple. A 9×9 square must be filled in with numbers from 1-9 with no repeated numbers in each line, horizontally or vertically. To challenge you more, there are 3×3 squares marked out in the grid, and each of these squares can't have any repeat numbers either.

		7		6			
	3	4	8				5
1	6			4			
	4			8	9	3	
8							1
	1	5	2			4	
			6			9	3
6				3	4	8	
			1		5		

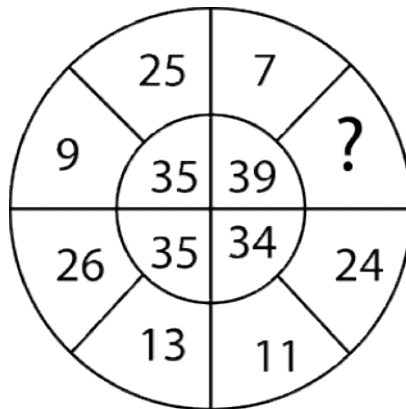
47) The rules for sudoku are simple. A 9×9 square must be filled in with numbers from 1-9 with no repeated numbers in each line, horizontally or vertically. To challenge you more, there are 3×3 squares marked out in the grid, and each of these squares can't have any repeat numbers either.

3			8		1			2
2		1		3		6		4
			2		4			
8		9				1		6
	6						5	
7		2				4		9
			5		9			
9		4		8		7		5
6			1		7			3

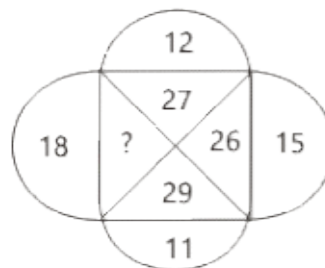
48) The rules for sudoku are simple. A 9×9 square must be filled in with numbers from 1-9 with no repeated numbers in each line, horizontally or vertically. To challenge you more, there are 3×3 squares marked out in the grid, and each of these squares can't have any repeat numbers either.

					7			
		2	4		6	3		
	1	7				9	6	
5	8						3	
				9				
	7						4	2
	9	4				6	5	
		5	2		8	1		
			5					

49) Find the missing number:-



50) Find the missing number:-



विषय - हिंदी

प्रश्न 1) निर्देशानुसार पदबंध पर आधारित प्रश्नों में से उचित विकल्प छांटो:-

1) कक्षा में गणित पढ़ाने वाले शिक्षक बहुत योग्य हैं। रेखांकित पदबंध है-

- i) संज्ञा पदबंध
- ii) क्रिया विशेषण पदबंध
- iii) विशेषण पदबंध
- iv) सर्वनाम पदबंध

2) जंगल के पीछे लगा बड़ा पेड़ गिर गया।

- i) संज्ञा पदबंध
- ii) क्रिया विशेषण पदबंध
- iii) विशेषण पदबंध
- iv) सर्वनाम पदबंध

3) मन्दिर में पूजा कर रहा वह मेरा भाई है।

- i) संज्ञा पदबंध
- ii) क्रिया पदबंध
- iii) विशेषण पदबंध
- iv) सर्वनाम पदबंध

4) वह जल्दी जल्दी दौड़ घर पहुंच गया।

- i) संज्ञा पदबंध
- ii) क्रिया पदबंध
- iii) विशेषण पदबंध
- iv) सर्वनाम पदबंध

5) महंगी खरीदी हुई गाड़ी कही खो गई है।

- i) क्रिया पदबंध
- ii) संज्ञा पदबंध
- iii) सर्वनाम पदबंध
- iv) विशेषण पदबंध

6) मानव मैदान में खेल रहा है।

- i) क्रिया पदबंध
- ii) संज्ञा पदबंध
- iii) सर्वनाम पदबंध
- iv) विशेषण पदबंध

7) मालती धीरे धीरे चलती हुई नदी तट पर पहुंच गई।

- i) क्रिया पदबंध
- ii) क्रिया विशेषण पदबंध

- iii) सर्वनाम पदबंध
iv) विशेषण पदबंध
- 8) आन्दोलन करने वाले छात्रों में से कोई घायल हो गया ।
i) क्रिया पदबंध
ii) संज्ञा पदबंध
iii) सर्वनाम पदबंध
iv) विशेषण पदबंध
- 9) अयोध्या के राजा दशरथ के चार पुत्र थे।
i) क्रिया पदबंध
ii) संज्ञा पदबंध
iii) सर्वनाम पदबंध
iv) विशेषण
- 10) इतनी लगन से काम करने वाले आप अवश्य सफल होंगे ।
i) संज्ञा पदबंध
ii) सर्वनाम पदबंध
iii) क्रिया पदबंध
iv) विशेषण पदबंध
- 11) फूलों पर तितलिया मंडराती दिखाई दे रही है ।
i) संज्ञा पदबंध
ii) सर्वनाम पदबंध
iii) क्रिया पदबंध
iv) विशेषण पदबंध
- 12) मजदूर सुबह से शाम तक लगातार काम करता रहा ।
i) क्रिया विशेषण
ii) क्रिया पदबंध
iii) संज्ञा पदबंध
iv) विशेषण पदबंध
- 13) बातें करने वाले बच्चों में से कुछ पकड़े गए।
i) क्रिया पदबंध
ii) सर्वनाम पदबंध
iii) विशेषण पदबंध
iv) संज्ञा पदबंध
- 14) उस छत के कोने में बैठा हुआ व्यक्ति पागल है।
i) क्रिया पदबंध
ii) सर्वनाम पदबंध

iii) विशेषण पदबंध

iv) संज्ञा पदबंध

15) वह बाजार की ओर आया होगा।

i) विशेषण पदबंध

ii) क्रिया पदबंध

iii) संज्ञा पदबंध

iv) सर्वनाम पदबंध

16) विरोध करने वाले व्यक्तियों में से कोई नहीं आया।

i) क्रियाविशेषण पदबंध

ii) संज्ञा पदबंध

iii) सर्वनाम पदबंध

iv) विशेषण पदबंध

17) मुझे रिया घर से दिखाई दे रही है।

i) विशेषण पदबंध

ii) संज्ञा पदबंध

iii) सर्वनाम पदबंध

iv) क्रिया पदबंध

18) आसमान में उड़ता गुब्बारा फट गया।

i) विशेषण पदबंध

ii) क्रिया पदबंध

iii) संज्ञा पदबंध

iv) सर्वनाम पदबंध

19) अपने दोस्त के साथ वह चला गया।

i) संज्ञा पदबंध

ii) विशेषण पदबंध

iii) अव्यय पदबंध

iv) क्रिया पदबंध

20) राकेश नदी में डूब गया।

i) संज्ञा पदबंध

ii) सर्वनाम पदबंध

iii) क्रिया पदबंध

iv) क्रिया विशेषण पदबंध

21) इतनी लगन से काम करने वाला मैं असफल नहीं हो सकता | रेखांकित का पदबंध है:

i) क्रिया पदबंध

ii) संज्ञा पदबंध

iii) क्रियाविशेषण पदबंध

iv) सर्वनाम पदबंध

22) राहुल की बड़ी बहन रिया कल आयी थी।

i) संज्ञा पदबंध

ii) क्रियाविशेषण पदबंध

iii) सर्वनाम पदबंध

iv) क्रिया पदबंध

23) अब खिड़की बंद किया जा सकता है।

i) संज्ञा पदबंध

ii) सर्वनाम पदबंध

iii) क्रिया विशेषण पदबंध

iv) क्रिया पदबंध

24) सुबह से शाम तक वह बैठा रहा।

i) अव्यय पदबंध

ii) सर्वनाम पदबंध

iii) क्रिया विशेषण पदबंध

iv) क्रिया पदबंध

प्रश्न 2) नीचे गद्य में आए मुहावरों को छांटो और उनके अर्थ लिखे:-

- 1) लेखक उदाहरण देते हुए कहता है कि एक बार उसने बड़े भाई साहब की कॉपी में यह लेख देखा जिसकी शब्द - रचना इस तरह से थी - स्पेशल ,अमीना ,भाइयों भाइयों-, दरअसल ,भाई - भाई। राधे श्याम ,श्रीयुत राधेश्याम ,एक घंटे तक - और उसके बाद एक आदमी का चेहरा बना हुआ था। लेखक ने बहुत कोशिश की कि वह बड़े भाई साहब के द्वारा लिखे गए इन शब्दों या पहेली को सुलझा सके या इनका कुछ अर्थ निकल सके । लेकिन वह हर तरह से असफल रहा। और भाई साहब से पूछने की हिम्मत नहीं हुई। अब भाई साहब नौवीं कक्षा में थे और वह पाँचवी कक्षा में था। उनके शब्दों का अर्थ जानना या उनकी की गई रचनाओं को समझना उसके लिए आसान बात नहीं थी।
- 2) इस तरह अंग्रेजी पढ़ोगे, तो जिंदगी भर पढ़ते रहोगे और एक हर्फ न आएगा। अंग्रेजी पढ़ना कोई हँसी खेल नहीं है कि जो चाहे, पढ़ ले, नहीं ऐरा - गौरा नत्थूअंग्रेजी के विद्वान हो जाते। यह खैरा सभी-ाँ रात - दिन आँखें फोड़नी पड़ती है और खून जलाना पड़ता है, तब कही यह विद्या आती है। आती क्या है, हाँ कहने को आ जाती है। बड़े बड़े विद्वान भी शुद्ध अंग्रेजी नहीं लिख सकते-, बोलना तो दूर रहा। और मैं कहता हूँ, तुम कितने घोंघा हो, कि मुझे देख कर भी सबक नहीं लेते। मैं कितनी मेहनत करता हूँ, यह तुम अपनी आँखों से देखते हो, अगर नहीं देखते, तो यह तुम्हारी आँखों का कसूर है, तुम्हारी बुद्धि का कसूर है।
- 3) इतने मेले तमाशे होते हैं-, मुझे तुमने कभी देखने जाते देखा है ? रोज ही क्रिकेट और हॉकी मैच होते हैं। मैं पास नहीं भटकता। हमेशा पढ़ता रहता हूँ। उस पर भी एक - एक दरजे में दो दो तीन- तीन साल पड़ा रहता हूँ, फिर भी तुम कैसे आशा करते हो कि तुम यों खेल कूद में वक्त गवाकर पास हो

जाओगे? मुझे तो दो ही तीन साल लगते हैं, तुम उम्र भर इसी दरजे में पड़े सड़ते रहोगे? अगर तुमने इस तरह उम्र गँवानी है, तो बेहतर है घर चले जाओ और मजे से गुल्लीडंडा खेलो। दादा की गाढ़ी - कमाई के रुपयों को क्यों खराब करते हो।

- 4) मैं यह लताड़ सुनकर आँसू बहाने लगता। जवाब ही क्या था। अपराध तो मैंने किया, लताड़ कौन सहे ? भाई साहब उपदेश की कला में निपूण थे। ऐसी - ऐसी लगती बातें कहते, ऐसे - ऐसे सूक्तिबाण चलाते - कि मेरे जिगर के टुकड़े हो जाते और हिम्मत टूट जाती। इस तरह जान तोड़ कर मेहनत करने की शक्ति मैं अपने में ना पाता था और उस निराशा में ज़रा देर के लिए मैं सोचने लगता -“क्यों ना घर चला जाऊँ। जो काम मेरे बूते के बाहर है, उसमें हाथ डाल कर क्यों अपनी जिंदगी खराब करूँ।”

प्रश्न 3) नीचे दिए गये काव्यांश को पढ़कर प्रश्नों के उत्तर छांटो:-

- 1) ऐसी बाँणी बोलिये ,मन का आपा खोड़।
अपना तन सीतल करै ,औरन कौ सुख होड़।।
i) हमे कैसी वाणी बोलनी चाहिए ?
ii) मीठी वाणी बोलने से क्या होता है ?
iii) मन का आप खोने से क्या मतलब है ?
- 2) कस्तूरी कुंडली बसै ,मृग ढूँढै बन माँहि।
ऐसैं घटि घटि राँम है -, दुनियां देखै नाँहिं।।
i) कस्तूरी कहा मिलती है ?
ii) मृग किसके पीछे भागता है ?
iii) राम का स्थान कहा है ?
iv) दुनिया किसको नहीं देखना चाहती?
- 3) सुखिया सब संसार है , खायै अरु सोवै।
दुखिया दास कबीर है , जागै अरु रोवै।।
i) कबीर ने सुखी किसको बताया है ?
ii) दुखी कोण सा व्यक्ति है ?
iii) मनमोजी व्यक्ति कैसे होते हैं?
- 4) निंदक नेड़ा राखिये , आँगणि कुटी बँधाड़।
बिन साबण पाँणी बिना , निरमल करै सुभाड़।।
i) किस प्रकार के लोगो को हमे आँगन में रखना चाहिए ?
ii) बिना साबुन से हमारे मन के मैल कैसे धुल जाते है ?
iii) सच कैसा लगता है?

प्रश्न 4) वाक्य रूपांतरण के उदहारण:-

- 1) 'बिमारी के कारण मैं महाविद्यालय नहीं जा सका'। वाक्य को संयुक्त वाक्य में बदलिए -
i) मैं महाविद्यालय नहीं जा सका, बिमारी के कारण।
ii) मैं बिमार हो गया था, इसलिए महाविद्यालय नहीं जा सका।
iii) बिमारी के कारण मैं कई दिनों तक महाविद्यालय नहीं जा सका था।

- iv) बिमारी के कारण में विद्यालय नहीं जा सका।
- 2) आपकी तरह कोई और नहीं लिखता'। वाक्य को मिश्र वाक्य में बदलिए -
- आपके लिखने का अंदाज बहुत अच्छा हैं।
 - आप बहुत अच्छा लिखते हैं।
 - आपकी तरह कोई ओर लिख ही नहीं सकता ।
 - जैसा आप लिखते हैं वैसा कोई और नहीं।
- 3) 'मैं चाहता था कि आज हिंदी पढ़ूँ'। वाक्य को सरल वाक्य में बदलिए -
- जैसे ही मेरा मन किया कि आज हिंदी पढ़ूँ लाइट चली गई।
 - मैं चाहता था कि मैं हिंदी पढ़ूँ।
 - मैं आज हिंदी पढ़ना चाहता था।
 - मेरा मन था कि आज हिंदी पढ़ूँ।
- 4) 'बदमाश लोगों से सभी दूर रहना चाहते हैं'। वाक्य को मिश्र वाक्य में बदलिए -
- बदमाश लोगों से सभी दूर रहना चाहते हैं कोई बात नहीं करता।
 - जो बदमाश होते हैं सभी उनसे दूर रहना चाहते हैं।
 - सभी बदमाश लोगों से दूर रहते हैं।
 - बदमाश लोगों से सभी दूर रहते हैं क्योंकि वे सभी से झगड़ा करते हैं।
- 5) 'जब से यहाँ वर्षा आया है तब से पानी बढ़ गया' । वाक्य का सम्बन्ध किससे है-
- संयुक्त वाक्य से
 - सरल वाक्य से
 - मिश्र वाक्य से
 - प्रश्न वाक्य से
- 6) जैसे ही चोरी हुआ पुलिस आ गए'। वाक्य को संयुक्त वाक्य में बदलिए -
- जैसे ही पुलिस आए चोर भाग गए।
 - पुलिस आए और चोर भाग गए।
 - पुलिस आते ही चोर भाग गए।
 - पुलिस आते ही चोरों को भागना पड़ा।
- 7) जबबढ़ेगी महँगाई तब-तब होंगे चुनाव जब-'। वाक्य को सरल वाक्य में बदलिए -
- जैसे ही चुनाव होगा जैसे ही महँगाई बढ़ेगी।
 - जबतब महँगाई बढ़ जायेगा यह सत्य है।-जब चुनाव होगा तब-
 - चुनाव आने से ही महँगाई बढ़ जाएगी।
 - जबतब महँगाई बढ़ जाएंगे ।-जब चुनाव आएंगे तब-
- 8) कक्षा में प्रथम आने वाले छात्र को ईनाम दिया गया।'। वाक्य को मिश्र वाक्य में बदलिए -
- जो छात्र कक्षा में प्रथम आया था उसे ईनाम दिय गया।
 - कक्षा में प्रथम आने वाले छात्र को हमेशा ईनाम दिय जाता है ।
 - छात्र को ईनाम दिया गया कक्षा में प्रथम आने पर।

- iv) जो कक्षा में प्रथम आता है उस छात्र को ईनाम दिया जाता है।
- 9) बादल आकर भी न बरसे। वाक्य को संयुक्त वाक्य में बदलिए -
- बदल आये तो सही वर्षा न हुई।
 - जैसे ही बदल आए वैसे ही वर्षा हुई।
 - बदल आए परन्तु वर्षा न हुई।
 - उपरोक्त कोई नहीं
- 10) सूर्योदय होने पर उजाला आ गया। वाक्य को संयुक्त वाक्य में बदलिए -
- सूर्योदय हुआ और उजाला आ गया।
 - सूर्योदय होने पर हमेशा ही उजाला छा जाता है।
 - सूर्योदय होने पर उजाला आ गया।
 - जैसे ही सूर्योदय हुआ वैसे ही उजाला आ गया।
- 11) 'आप आ कर सो जाए'। वाक्य को संयुक्त वाक्य में बदलिए -
- क्योंकि आप गए है तो आप सो सकते हैं।
 - आप आ कर सोने चले जाएँ।
 - आ कर हमेशा सो जाए ।
 - आप आएँगे और सोएंगे।
- 12) 'वह पटना जा कर काम करने लगे है'। वाक्य को मिश्र वाक्य में बदलिए -
- क्योंकि वह पटना जा कर काम करने लगे है।
 - वह पटना इसीलिए गए थे क्योंकि वह काम करना चाहते थे।
 - वह पटना गए ताकि वह काम कर सके।
 - जब से वह पटना गए तब से काम करने लगे है।
- 13) 'रोहन ने नकल करने वाले छात्र को पकड़ लिया'। वाक्य को संयुक्त वाक्य में बदलिए ।
- छात्र नकल कर रहा था, रोहन ने पकड़ लिया।
 - रोहन ने नकल करने वाले छात्र को पकड़ कर सजा दी।
 - रोहन ने छात्र को पकड़ा क्योंकि वह नकल कर रहा था।
 - इन में से कोई नहीं
- 14) 'सूरज के डूबते ही अँधेरा हो गया'। वाक्य को मिश्र वाक्य में बदलिए -
- जैसे ही सूरज डूबा वैसे ही अँधेरा हो गया।
 - सूरज डूबा और उजाला दूर हो गया।
 - क्योंकि सूरज डूब गया था उजाला को दूर होना ही था।
 - उपरोक्त कोई नहीं
- 15) 'परीक्षाएँ समाप्त होते ही हम पंजाब गए'। वाक्य को संयुक्त वाक्य में बदलिए -
- क्योंकि परीक्षाएँ समाप्त हो गई थी इसलिए हम पंजाब जाएंगे।
 - परीक्षाएँ समाप्त हुई नहीं कि हम पंजाब गए।
 - परीक्षाएँ समाप्त हुई और हम पंजाब चले गए।

- iv) जैसे ही परीक्षाएँ समाप्त हुईं वैसे ही हम पंजाब आ गए।
- 16) 'सोहन ने टॉस जीता इसलिए खुश हो गया।' वाक्य को सरल वाक्य में बदलिए -
- सोहन ने टॉस जीता था इसलिए खुश हो रहा था।
 - सोहन खुश हो गया क्योंकि उसने टॉस जीता था।
 - टॉस जीतते ही सोहन खुश हो गया।
 - सोहन ने टॉस जीता इसलिए सोहन की खुशी का कोई ठिकाना न था।
- 17) 'मैं अकेला था और दस वयक्तियों ने मुझे पीटा।' वाक्य को मिश्र वाक्य में बदलिए।
- मैं अकेला था जिस कारण दस वयक्तियों ने मुझे पीटा।
 - जब मैं अकेला था तब मुझे दस वयक्तियों ने पीटा।
 - मैं अकेला था और दस वयक्तियों ने मुझे पीटा और लूट लिया।
 - क्योंकि मैं अकेला था इसलिए दस वयक्तियों ने मुझे पीटा और लूट लिया।
- 18) 'जैसे ही साँप दिखाई दिया वैसे ही लोग डर गए।' वाक्य को संयुक्त वाक्य में बदलिए।
- साँप दिखाई दिया और लोग डर गए।
 - जैसे ही साँप को लोगों ने देखा वैसे ही लोग डर गए।
 - क्योंकि साँप दिखाई दिया था इसलिए लोग डर गए थे।
 - लोग डर गए क्योंकि उन्होंने साँप को देखा था।
- 19) 'जब वर्षा शुरू हुई तब अमित चला गया।' वाक्य को संयुक्त वाक्य में बदलिए -
- वर्षा शुरू हुई और अमित चल गया।
 - जैसे ही वर्षा शुरू हुई वैसे ही अमित चल गया।
 - वर्षा के शुरू होते ही तब अमित चल गया।
 - उपरोक्त कोई नहीं

प्रश्न 5) सूचना लेखन तैयार कीजिये:-

- आप केंद्रीय विद्यालय जलवायु विहार दिल्ली की सांस्कृतिक इकाई के सचिव प्रत्युषप्रत्यूषा हैं। आपके / विद्यालय में स्वतंत्रता दिवस की पूर्व संध्या पर देशभक्ति पूर्ण कविताओं का पाठ किया जाना है जिसमें शहर के प्रसिद्ध कवि पधार रहे हैं। इसमें छात्रछात्राओं के अभिभावक भी सादर आमंत्रित हैं। इस संबंध में एक सूचना आलेखन कीजिए।
- गांधी जयंती के अवसर पर आपके विद्यालय ने स्वच्छता अभियान चलाने का निर्णय लिया है। इसके लिए सामने वाली बस्ती में साफ़जागरूकता -सफ़ाई करने के अलावा लोगों में स्वच्छता के प्रति जन-फैलाए जाने का निश्चय किया गया है। इसकी सूचना देते हुए एक सूचना आलेख तैयार कीजिए। आप लय के हेड ब्वाय जयंत अपने विद्या
- आप टैगोर अपार्टमेंट टैगोर गार्डन दिल्ली के आर०डब्ल्यू०ए० के सचिव हैं। गांधी जयंती के शुभ अवसर पर आरडब्ल्यू०ए० के सदस्यों ने डॉक्टरों की देखरेख में रक्तदान शिविर का आयोजन किया है। इच्छुक व्यक्ति रक्तदान हेतु सादर आमंत्रित हैं। इस संबंध में सूचना आलेख तैयार कीजिए।

- 4) आपके शहर के खादी वस्त्र भंडार ने गांधी जयंती के अवसर पर खादी वस्त्रों पर 10 प्रतिशत से 30 प्रतिशत तक छूट देने का निश्चय किया है ताकि खादी वस्त्रों की लोकप्रियता बढ़े। स्वयं को खादी वस्त्र भंडार का प्रबंधक मानकर एक सूचना आलेख तैयार कीजिए।

प्रश्न 6) विज्ञापन लेखन तैयार कीजिये:-

- 1) अपने विद्यालय की संस्था 'पहरेदार' की ओर से जल का दुरुपयोग रोकने का आग्रह करते हुए लगभग 30 शब्दों में एक विज्ञापन का आलेख तैयार कीजिए।
- 2) विद्यालय की कलाविधि में कुछ चित्र । इसके लिए एक विज्ञापन बिक्री के लिए उपलब्ध हैं (पेंटिंग्स) लगभग 50 शब्दों में लिखिए।
- 3) हिंदी की पुस्तकों की प्रदर्शनी में आधे मूल्य पर बिक रही महत्वपूर्ण पुस्तकों को खरीदकर लाभ उठाने के लिए लगभग 25-30 शब्दों में एक विज्ञापन लिखिए।
- 4) सड़क पर टहलते हुए एक बैग मिला जिसमें कुछ रुपये, मोबाइल फोन तथा अन्य कई महत्वपूर्ण कागजात थे। लगभग 25-30 शब्दों में एक विज्ञापन तैयार कीजिए कि अधिकारी व्यक्ति आपसे संपर्क कर अपना बैग ले जाए।
- 5) समीर एंसीबलाने वाली कंपनी के लिए विज्ञापन तैयार कीजिए। .

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Q 1) Read the passage carefully and answer the following questions:-

A solution of slaked lime produced by the reaction is used for white washing walls. Calcium hydroxide reacts slowly with the carbon dioxide in air to form a thin layer of calcium carbonate on the walls. Calcium carbonate is formed after two to three days of white washing and gives a shiny finish to the walls. It is interesting to note that the chemical formula for marble is also CaCO_3 .

- 1) Give the reaction for the formation of calcium carbonate with physical states.
- 2) Write the formulas of slaked lime, quick lime.
- 3) Explain why calcium carbonate is used for white washing and not any other substance.
- 4) Explain the importance of writing the physical states in a chemical equation.
- 5) Write any one application of calcium carbonate other than white washing.

Q 2) Read the passage carefully and answer the following questions:-

You must have observed that iron articles are shiny when new, but get coated with a reddish brown powder when left for some time. This process is commonly known as rusting of iron. Some other metals also get tarnished in this manner. Have you noticed the colour of the coating formed on copper and silver? When a metal is attacked by substances around it such as moisture, acids, etc., it is said to corrode and this process is called corrosion. The black coating on silver and the green coating on copper are other examples of corrosion.

- 1) Explain one benefit of corrosion.
- 2) Write the formula of corrosion of iron.
- 3) If corrosion occurs in the case of iron articles, why is the iron pillar at Qutub Minar not affected?
- 4) Write any two ways to prevent rusting.
- 5) What does you mean by galvanization?

Q 3) Read the passage carefully and answer the following questions:-

When fats and oils are oxidized, they become rancid and their smell and taste change. Usually substances which prevent oxidation (antioxidants) are added to foods containing fats and oil. Keeping food in air tight containers helps to slow down oxidation.

- 1) What do you mean by the word RANCIDITY?
- 2) Write any three methods to prevent rancidity.
- 3) What is the meaning of antioxidants? Give an example.
- 4) Which gas is filled in the chips packets to keep them crunchy?
- 5) Write any traditional method used by our ancestors to prevent rancidity.

Q 4) Read the passage carefully and answer the following questions:-

We have seen that the decomposition reactions require energy either in the form of heat, light or electricity for breaking down the reactants. Reactions in which energy is absorbed are known as endothermic reactions.

- 1) Write the definition of exothermic reaction.
- 2) What do you mean endothermic reactions?
- 3) Write a reaction which falls under endothermic reaction.
- 4) What is decomposition reaction?
- 5) Explain photolysis.

Q 5) Read the passage carefully and answer the following questions:-

The reaction between carbon dioxide and calcium hydroxide (lime water), Calcium hydroxide, which is a base, reacts with carbon dioxide to produce a salt and water. Since this is similar to the reaction between a base and an acid, we can conclude that nonmetallic oxides are acidic in nature.

- 1) What is the nature of Carbon dioxide?
- 2) Give another reaction of non-metallic oxide and a base?
- 3) Arrange the following bases in increasing order: NaOH , Ca(OH)_2 & Mg(OH)_2 .
- 4) Write the complete reaction between calcium hydroxide and carbon dioxide with physical states?

5) What is the nature of non-metallic oxide?

Q 6) Read the passage carefully and answer the following questions:-

Take solutions of glucose, alcohol, hydrochloric acid, sulphuric acid, etc. Fix two nails on a cork, and place the cork in a 100 mL beaker. Connect the nails to the two terminals of a 6 volt battery through a bulb and a switch, as shown in. Now pour some dilute HCl in the beaker and switch on the current. Repeat with dilute sulphuric acid. What do you observe? Repeat the experiment separately with glucose and alcohol solutions. What do you observe now? Does the bulb glow in all cases?

- 1) What changes occur in case of acids i.e HCl, H₂SO₄?
- 2) Why do glucose and alcohol not conduct electricity?
- 3) Why do acids not show acidic behavior in absence of water?
- 4) Does rain water or distilled water conduct electricity?
- 5) Why do aqueous solutions of acids conduct electricity?

Q 7) Read the passage carefully and answer the following questions:-

Plaster of Paris, On heating gypsum at 373 K, it loses water molecules and becomes calcium sulphate hemihydrate (CaSO₄ · ½ H₂O). This is called Plaster of Paris. Plaster of Paris is a white powder and on mixing with water, it changes to gypsum once again giving a hard solid mass. Water of crystallisation is the fixed number of water molecules present in one formula unit of a salt. Five water molecules are present in one formula unit of copper sulphate. Chemical formula for hydrated copper sulphate is CuSO₄ · 5H₂O. Now you would be able to answer the question whether the molecule of Na₂CO₃ · 10H₂O is wet.

- 1) What is the molecular formula of gypsum?
- 2) Write the equation of formation of plaster of Paris by heating gypsum?
- 3) What are the uses of Plaster of Paris?
- 4) Give the equation when POP is mixed with water?
- 5) What does the 2 denote in CaSO₄ · 2 H₂O?

Q 8) Read the passage carefully and answer the following questions:-

Sodium hydroxide When electricity is passed through an aqueous solution of sodium chloride (called brine), it decomposes to form sodium hydroxide. The process is called the chlor-alkali process because of the products formed— chlor for chlorine and alkali for sodium hydroxide.

- 1) Write the chemical equation involved in this process?
- 2) What are the substances that are formed at anode and cathode on chlor-alkali process?
- 3) What are the uses of chlorine?
- 4) Where does the sodium hydroxide solution form?
- 5) What are the uses of Sodium hydroxide?

Q 9) Read the passage carefully and answer the following questions:-

Salts of a strong acid and a strong base are neutral with pH value of 7. On the other hand, salts of a strong acid and weak base are acidic with pH value less than 7 and those of a strong base and weak acid are basic in nature, with pH value more than 7.

- 1) Classify the following as strong bases and weak bases: KOH, NaOH, CsOH, NH₄OH
- 2) Write a reaction of a strong acid and a weak base?
- 3) What happens when strong acids and bases react to each other? Explain by giving example.
- 4) Identify the following as strong acid: CH₃COOH, H₂SO₄, HNO₃, H₃PO₄, H₂CO₃, HCl.
- 5) Classify the following acids as strong or weak acid: acetic acid, citric acid, tartaric acid, oxalic acid.

Q 10) Read the passage carefully and answer the following questions:-

A scale for measuring hydrogen ion concentration in a solution, called pH scale has been developed. The p in pH stands for 'potenz' in German, meaning power. On the pH scale we can measure pH generally from 0 (very acidic) to 14 (very alkaline). pH should be thought of simply as a number which indicates the acidic or basic nature of a solution. Higher the hydronium ion concentration, lower is the pH value.

- 1) What does the scale represent when pH value increases from 7 to 14?
- 2) What is the pH value of milk of magnesia?

- 3) What are the important of pH in everyday life?
- 4) What happens when the pH of mouth is lower than 5.5?
- 5) Two solutions X&Y. The pH of X is 4 and the pH of Y is 7. What is the nature of two solution?

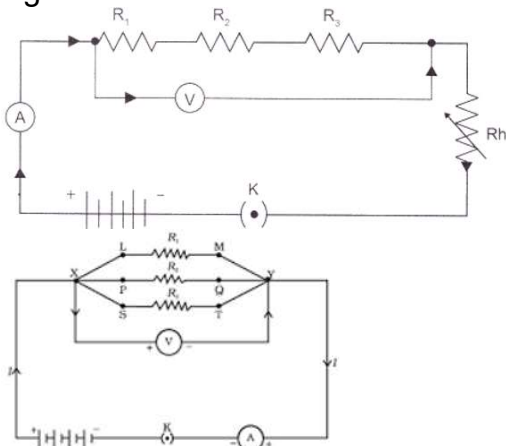
Q 11) Read the passage carefully and answer the following questions:-

Salt of a strong acid and strong base is neutral with a pH value of 7. NaCl common salt is formed by a combination of hydrochloride and sodium hydroxide solution. This is the salt that is used in food. Some salt is called rock salt bed of rack salt was formed when seas of bygone ages dried up. The common salt thus obtained is an important raw material for various materials of daily use, such as sodium hydroxide, baking soda, washing soda, and bleaching powder.

- 1) Which of the following does not form an acidic salt?
 - a) Phosphoric acid
 - b) Carbonic acid
 - c) Hydrochloric acid
 - d) Sulphuric acid
- 2) Which of the following salts has no water of crystallization?
 - a) Blue vitriol
 - b) Washing soda
 - c) Baking soda
 - d) Gypsum
- 3) The formula of baking soda is
 - a) K_2CO
 - b) $KHCO_3$
 - c) $NaHCO_3$
 - d) Na_2CO_3
- 4) Which of the following is treated with chlorine to obtain bleaching powder
 - a) $CaSO_4$
 - b) $Ca(OH)_2$
 - c) $Mg(OH)_2$
 - d) KOH
- 5) Which of the following salt is used for removing the permanent hardness of water
 - a) Washing soda
 - b) Baking soda
 - c) Bleaching powder
 - d) $NaOH$

Q 12) Read the passage carefully and answer the following questions:-

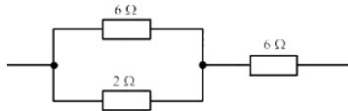
In resistance for a system of the resistor, there are two methods of joining the resistors together as shown below



It showed an electric current in which 3 resistors having resistors R_1 , R_2 and R_3 respectively are

joined end to end i.e series. While the combination of the resistor in which 3 resistors are connected together which points X and Y are said to be parallel.

- 1) The total potential difference across a combination of a resistor in series is equal to
 - a) $V_1 + V_2 + V_3$
 - b) $V_1 - V_2 + V_2$
 - c) $V_1 + V_2$
 - d) None of these
- 2) In a series combination of resistors, the current is
 - a) same at every point of the circuit
 - b) different at every point of the circuit
 - c) zero
 - d) can not be determined
- 3) The electrical energy disputed in the resistor is given by
 - a) $W = VIT$
 - b) $W = VIR$
 - c) $W = RIT$
 - d) $W = RT$
- 4) If 5 resistors, each of value 0.2 ohm are connected in series what will be the resultant resistance
 - a) 1 ohm
 - b) 10 ohm
 - c) 6 ohm
 - d) 8 ohm
- 5) The figure given below shows three resistors.

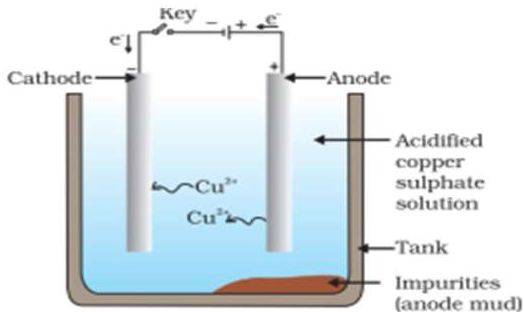


Their combined resistance is:

- a) 16 Ω
- b) 14 Ω
- c) 203Ω203Ω
- d) 152Ω152Ω

Q 13) Read the passage carefully and answer the following questions:-

In the electrolytic refining of copper. The electrolyte is a solution of acidified copper sulphate. There are an anode and cathode. Refining is carried out by passing an electric current.



- 1) The anode is _____.
 - a) pure strips
 - b) impure copper
 - c) refined copper
 - d) none of these
- 2) Anode mud consists of:
 - a) insoluble impurities
 - b) soluble impurities

- c) pure metal
 - d) impure metal
- 3) Which of the following are refined electrolytically: (A) Au, (B) Cu, (C) Zn, (D) K
- a) A and B
 - b) B and C
 - c) A, B and C
 - d) B, C and D
- 4) On passing, electric current Cu is deposited on:
- a) cathode
 - b) anode
 - c) bottom of cathode
 - d) bottom of anode
- 5) Which one of the following four metals would be displaced from the solution of its salt by the other three metals?
- a) Zn
 - b) Mg
 - c) Cu
 - d) Ag

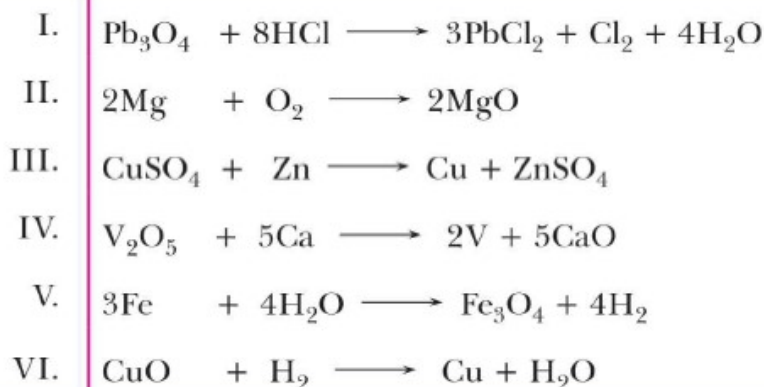
Q 14) Read the passage carefully and answer the following questions:-

Corrosion is the phenomenon of deterioration of surface of metal in presence of air and moisture. It is a natural process and in the presence of a moist atmosphere, chemically active metals get corroded. This is an oxidation reaction. Rusting is the process where iron corrodes due to exposure to the atmosphere. The main circumstance of corrosion occurs with iron because it is a structural material in construction, bridges, buildings, rail transport, ships, etc. Aluminium is also an important structural metal, but even aluminium undergoes oxidation reactions. However, aluminium doesn't corrode or oxidize as rapidly as its reactivity suggests. Copper (Cu) corrodes and forms a basic green carbonate.

- 1) What is rusting?
- 2) Which two metals do not corrode easily?
- 3) Write the chemical name of the compound formed on corrosion of silver.
- 4) Corrosion is
 - a) a redox reaction
 - b) a reduction reaction
 - c) a displacement reaction
 - d) an oxidation reaction

Q 15) Read the passage carefully and answer the following questions:-

Oxidation is the process of gaining of oxygen, or losing of hydrogen. Reduction is the process of losing of oxygen or gaining of hydrogen. The substance which undergoes oxidation is the reducing agent while the substance which undergoes reduction is known as the oxidising agent. Oxidation and reduction always take place together and these type of reactions are known as redox reactions. Some of the examples of redox reactions are given below:



- 1) Give two examples of oxidation reaction from your everyday life.
- 2) Write the oxidising agent in the reaction III and VI.
- 3) Which of the following is an oxidising agent?
 - a) LiAlH_4
 - b) Alkaline KMnO_4
 - c) Acidified $\text{K}_2\text{Cr}_2\text{O}_7$
 - d) Both (b) and (c)

4) Out of oxidation and reduction, which reaction takes place at anode?

Q 16) Read the passage carefully and answer the following questions:-

A chemical reaction is a representation of chemical change in terms of symbols and formulae of reactants and products. There are various types of chemical reactions like combination, decomposition, displacement, double displacement, oxidation and reduction reactions. Reactions in which heat is released along with the formation of products are called exothermic chemical reactions. All combustion reactions are exothermic reactions.

- 1) The chemical reaction in which a single substance breaks down into two or more simpler substances upon heating is known as
 - a) thermal decomposition reaction
 - b) photo decomposition reaction
 - c) electric decomposition reaction
 - d) both (a) and (c)
- 2) The massive force that pushes the rocket forward through space is generated due to the
 - a) combination reaction
 - b) decomposition reaction
 - c) displacement reaction
 - d) double displacement reaction
- 3) A white salt on heating decomposes to give brown fumes and yellow residue is left behind. The yellow residue left is of
 - a) lead nitrate
 - b) nitrogen oxide
 - c) lead oxide
 - d) oxygen gas
- 4) Which of the following reactions represents a combination reaction?
 - a) $\text{CaO (s)} + \text{H}_2\text{O (l)} \rightarrow \text{Ca(OH)}_2 \text{ (aq)}$
 - b) $\text{CaCO}_3 \text{ (s)} \rightarrow \text{CaO (s)} + \text{CO}_2 \text{ (g)}$
 - c) $\text{Zn (s)} + \text{CuSO}_4 \text{ (aq)} \rightarrow \text{ZnSO}_4 \text{ (aq)} + \text{Cu (s)}$
 - d) $2\text{FeSO}_4 \text{ (s)} \rightarrow \text{Fe}_2\text{O}_3 \text{ (s)} + \text{SO}_2 \text{ (g)} + \text{SO}_3 \text{ (g)}$
- 5) Complete the following statements by choosing correct type of reaction for X and Y.

Statement 1: The heating of lead nitrate is an example of 'X' reaction.

Statement 2: The burning of magnesium is an example of 'Y' reaction.

 - a) X- Combination, Y- Decomposition
 - b) X- Decomposition, Y-Combination
 - c) X- Combination, Y-Displacement
 - d) X- Displacement, Y-Decomposition

Q 16) Read the passage carefully and answer the following questions:-

pH is quite useful to us in a number of ways in daily life. Some of its applications are:

Control of pH of the soil : Plants need a specific pH range for proper growth. The soil may be acidic, basic or neutral depending upon the relative concentration of H^+ and OH^- . The pH of any soil can be determined by using pH paper. If the soil is too acidic, it can be corrected by adding lime to it. If the soil is too basic, it can be corrected by adding organic manure which contains acidic materials.

Regaining shine of a tarnished copper vessel by use of acids : A copper vessel gets tarnished due to formation of an oxide layer on its surface. On rubbing lemon on the vessel, the surface is cleaned and the vessel begins to shine again. This is due to the fact that copper oxide is basic in

nature, which reacts with the acid (citric acid) present in lemon to form a salt (copper citrate) which is washed away with water. As a result, the layer of copper oxide is removed from the surface of the vessel and the shining surface is exposed. **Self-defence by animals through chemical warfare** : Stings of bees and ants contain methanoic acid. When stung, it causes lot of pain and irritation. This can be cured by rubbing the affected area with mild base like baking soda.

- 1) **When black copper oxide placed in a beaker is treated with dilute HCl, its colour changes to**
 - a) White
 - b) dark red
 - c) bluish green
 - d) no change.
- 2) **P is an aqueous solution of acid and Q is an aqueous solution of base. When these two are diluted separately, then**
 - a) pH of P increases while that of Q decreases till neutralization.
 - b) pH of P decreases while that of Q increases till neutralization.
 - c) pH of both P and Q decrease.
 - d) pH of both P and Q increase.
- 3) **Which of the following acids is present in bee sting?**
 - a) Formic acid
 - b) Acetic acid
 - c) Citric acid
 - d) Hydrochloric acid
- 4) **Sting of ant can be cured by rubbing the affected area with soap because**
 - a) it contains oxalic acid which neutralizes the effect of formic acid
 - b) it contains aluminium hydroxide which neutralizes the effect of formic acid
 - c) it contains sodium hydroxide which neutralizes the effect of formic acid
 - d) none of these
- 5) **The pH of soil X is 7.5 while that of soil Y is 4.5. Which of the two soils, should be treated with powdered chalk to adjust its pH?**
 - a) X only
 - b) Y only
 - c) Both X and Y
 - d) none of these

Q 17) Read the passage carefully and answer the following questions:-

A student was asked to investigate what happens when a piece of shiny magnesium ribbon is added to copper sulphate solution. The apparatus was set up. The mass was recorded at the start and again after one hour.

- 1) Complete the equation: $\text{Mg} + \text{CuSO}_4 \rightarrow \text{-----} + \text{-----}$
 - a) $\text{MgSO}_4 + \text{Cu}$
 - b) $\text{MgS} + \text{Cu}_2\text{O}$
 - c) $\text{MgO} + \text{Cu}$
 - d) $\text{Mg SO}_3 + \text{Cu}_2\text{O}$
- 2) Choose from below the name given to this type of reaction:
 - a) Combustion
 - b) Displacement
 - c) Corrosion
 - d) Electrolysis
- 3) Balance the following symbol equation that represents the displacement reaction that takes place between zinc and silver nitrate solution. $\text{Zn} + \text{AgNO}_3 \rightarrow \text{Zn}(\text{NO}_3)_2 + \text{Ag}$
 - a) $\text{Zn} + 2\text{AgNO}_3 \rightarrow \text{Zn}(\text{NO}_3)_2 + 2\text{Ag}$
 - b) $\text{Zn} + 3\text{AgNO}_3 \rightarrow \text{Zn}(\text{NO}_3)_2 + 3\text{Ag}$
 - c) $\text{Zn} + 2\text{AgNO}_3 \rightarrow \text{Zn}(\text{NO}_3)_2 + \text{Ag}$

- d) $2 \text{Zn} + \text{AgNO}_3 \rightarrow \text{Zn}(\text{NO}_3)_2 + \text{Ag}$
- 4) The experiment was repeated using sodium sulphate solution instead of copper sulphate solution. No reaction took place. Put the metals copper, magnesium and sodium in order of reactivity.
- I. Sodium II Copper III Magnesium
 - I Magnesium II Copper III Sodium
 - I. Copper II. Magnesium III. Sodium
 - I. Sodium II. Magnesium III. Copper
- 5) What will be the mass of the beaker and content after 1 hour?
- More than 80.6 g
 - Equal to 80.6 g
 - Less than 80.6 g
 - None of the above

Q 18) Read the passage carefully and answer the following questions:-

Reduction + Oxidation = Redox Reaction

When the reaction occurs, reducing agent reduces the other species. In other words, what is oxidized is the reducing agent and what is reduced is the oxidizing agent. A good example of a redox reaction is the thermite reaction, in which iron atoms in ferric oxide lose (or give up) O atoms to Al atoms, producing Al_2O_3 . $\text{Fe}_2\text{O}_3 (\text{s}) + 2\text{Al} (\text{s}) \rightarrow \text{Al}_2\text{O}_3 (\text{s}) + 2\text{Fe}$

- A substance which oxidizes itself and reduces other is known as:
 - Oxidizing agent
 - Reducing agent
 - Both of these
 - None of these
- 'Thermite is a pyrotechnic composition of metal powder, which serves as fuel, and metal oxide. When ignited by heat, thermite undergoes a reaction between iron and Aluminum Oxide and is used in the welding of railway tracks. The type of reaction is called:
 - Reduction
 - Redox
 - Oxidation
 - Decomposition
- "Redox reactions can occur relatively slowly, as in the formation of rust, or much more rapidly, as in the case of burning fuel" Rusting and combustion are quite different. Which of the following lines is not the correct explanation for this?
 - Rusting occurs at the surface of iron to form a layer of rust.
 - Rusting gives out lots of heat and light.
 - Rusting is an example of slow oxidation.
 - It can be hampered by applying paint.
- Reduction can be defined as:
 - Gain of electrons
 - Gain of Oxygen
 - Loss of Hydrogen
 - Loss of electrons

Q 19) Read the passage carefully and answer the following questions:-

Oxidation is the process of gaining of oxygen, or losing of hydrogen. Reduction is the process of losing of oxygen or gaining of hydrogen. The substance which undergoes oxidation is the reducing agent while the substance which undergoes reduction is known as the oxidising agent. Oxidation and reduction always take place together and these types of reactions are known as redox reactions.

- Give two examples of oxidation reaction from your everyday life.
- Write the oxidising agent in the reaction III and VI.
- Which of the following is an oxidising agent?
 - LiAlH_4

- b. Alkaline KMnO_4
 - c. Acidified $\text{K}_2\text{Cr}_2\text{O}_7$
 - d. Both (b) and (c)
- 4) Out of oxidation and reduction, which reaction takes place at anode? 3.5. Which substance undergoes reduction?

Q 20) Read the passage carefully and answer the following questions:-

A chemical reaction is a representation of chemical change in terms of symbols and formulae of reactants and products. There are various types of chemical reactions like combination, decomposition, displacement, double displacement, oxidation and reduction reactions. Reactions in which heat is released along with the formation of products are called exothermic chemical reactions. All combustion reactions are exothermic reactions.

- 1) The chemical reaction in which a single substance breaks down into two or more simpler substances upon heating is known as
 - a) thermal decomposition reaction
 - b) photo decomposition reaction
 - c) electric decomposition reaction
 - d) both (a) and (c)
- 2) The massive force that pushes the rocket forward through space is generated due to the
 - a) combination reaction
 - b) decomposition reaction
 - c) displacement reaction
 - d) double displacement reaction
- 3) A white salt on heating decomposes to give brown fumes and yellow residue is left behind. The yellow residue left is of
 - a) lead nitrate
 - b) nitrogen oxide
 - c) lead oxide
 - d) oxygen gas
- 4) Which of the following reactions represents a combination reaction?
 - a) $\text{CaO (s)} + \text{H}_2\text{O (l)} \rightarrow \text{Ca(OH)}_2 \text{ (aq)}$
 - b) $\text{CaCO}_3 \text{ (s)} \rightarrow \text{CaO (s)} + \text{CO}_2 \text{ (g)}$
 - c) $\text{Zn (s)} + \text{CuSO}_4 \text{ (aq)} \rightarrow \text{ZnSO}_4 \text{ (aq)} + \text{Cu (s)}$
 - d) $2\text{FeSO}_4 \text{ (s)} \rightarrow \text{Fe}_2\text{O}_3 \text{ (s)} + \text{SO}_2 \text{ (g)} + \text{SO}_3 \text{ (g)}$
- 5) Complete the following statements by choosing correct type of reaction for X and Y.
 Statement 1: The heating of lead nitrate is an example of 'X' reaction.
 Statement 2: The burning of magnesium is an example of 'Y' reaction.
 - a) X- Combination, Y- Decomposition
 - b) X- Decomposition, Y-Combination
 - c) X- Combination, Y-Displacement
 - d) X- Displacement, Y-Decomposition

Q 21) Read the passage carefully and answer the following questions:-

Chemical equation is a method of representing a chemical reaction with the help of symbols and formulae of the substances involved in it. In a chemical equation, the substances which combine or react are called reactants and new substances produced are called products. A chemical equation is a short hand method of representing a chemical reaction. A balanced chemical equation has equal number of atoms of different elements in the reactants and products side. An unbalanced chemical equation has unequal number of atoms of one or more elements in reactants and products. Formulae of elements and compounds are not changed to balance an equation.

- 1) Consider the following reaction: $p\text{Mg} + 3\text{N}_2 + q\text{H}_2\text{O} \rightarrow r\text{Mg(OH)}_2 + s\text{NH}_3$ When the equation is balanced, the coefficients p, q, r, s respectively is
 - a) 1,3,3,2
 - b) 1,6,3,2

- c) 1,2,3,2
d) 2,3,6, 2
- 2) Which of the following information is not conveyed by a balanced chemical equation?
a) Physical states of reactants and products
b) Symbols and formulae of all the substances involved in a particular reaction
c) Number of atoms/molecules of the reactants and products formed
d) Whether a particular reaction is actually feasible or not
- 3) The balancing of chemical equations is in accordance with
a) Law of combining volumes
b) Law of constant proportions
c) Law of conservation of mass
d) Both (b) and (c)
- 4) Which of the following chemical equations is an unbalanced one?
a) $2\text{NaHCO}_3 \rightarrow \text{Na}_2\text{CO}_3 + \text{H}_2\text{O} + \text{CO}_2$
b) $2\text{C}_4\text{H}_{10} + 12\text{O}_2 \rightarrow 8\text{CO}_2 + 10\text{H}_2\text{O}$
c) $2\text{Al} + 6\text{H}_2\text{O} \rightarrow 2\text{Al}(\text{OH})_3 + 3\text{H}_2$
d) $4\text{NH}_3 + 5\text{O}_2 \rightarrow 4\text{NO} + 6\text{H}_2\text{O}$
- 5) Which of the following statements is/are correct?
a) A chemical equation tells us about the substances involved in a reaction.
b) A chemical equation informs us about the symbols and formulae of the substances involved in a reaction.
c) A chemical equation tells us about the atoms or molecules of the reactants and products involved in a reaction.
d) All the above.

Q 22) Read the passage carefully and answer the following questions:-

There are many substances which are used to detect the solutions as acidic or basic. They are called Acid-Base indicators. Depending upon the property of the indicator, we have different groups of Acid-Base indicators. Some indicators show different colors in acidic or basic medium and some indicators give different odors in acidic and basic medium. These indicators are either extracted from the plants or synthesized in the laboratory or industry.

- 1) Which of the following will turn red litmus blue?
a) Amla juice
b) Soft drink
c) lemon juice
d) Baking soda
- 2) A solution turns blue litmus red, the pH of the solution is likely to be
a) 6
b) 8
c) 7
d) 9
- 3) Which one of the following can be used as an acid-base indicator by visually impaired student?
a) Turmeric
b) Vanilla
c) Hibiscus
d) Litmus
- 4) Select the incorrect option. Indicator Colour in acidic medium Colour in basic medium
a) Litmus(Purple) Red Blue
b) Phenolphthalein(Colorless) Pink Colorless
c) Red cabbage extract (Purple) Red Green
d) Methyl orange (Orange) Red Yellow
- 5) Which of the following are olfactory indicators?
a) Onion Extract

- b) Clove Oil
- c) Vanilla Extract
- d) All are correct

Q 23) Read the passage carefully and answer the following questions:-

Taj Mahal, the seventh wonder of the world, is made of white stone. This white stone contains the same substance 'A' that is present in chalk powder and lime-stone. It is turning yellow due to polluted air. If it is cleaned by an acidic cleaner, a gas 'B' is released, which when passed through a solution 'C', forms the same substance which is present in the white stone that was used to make Taj Mahal.

- 1) The substance A is
 - a) Ca_3CO_2
 - b) $\text{Ca}(\text{OH})_2$
 - c) CaCO_3
 - d) CaSO_4
- 2) Gas B is-
 - a) Hydrogen
 - b) Chlorine
 - c) Nitrogen
 - d) Carbon dioxide
- 3) Solution C is
 - a) CaCl_2
 - b) $\text{Ca}(\text{OH})_2$
 - c) CaCO_3
 - d) CaSO_4
- 4) What is the nature of the substance A?
 - a) Acidic
 - b) Neutral
 - c) Basic
 - d) None
- 5) The polluted air around Taj mahal leads to the following problem because of which it is getting Marble cancer:
 - a) Global Warming
 - b) Green House Effect
 - c) Acid Rain
 - d) All are correct

Q 24) Read the passage carefully and answer the following questions:-

A scale for measuring hydrogen ion concentration in a solution, called pH scale has been developed. The p in pH stands for 'potenz' in German, meaning power. On the pH scale we can measure pH from 0 to 14. pH should be thought of simply as a number which indicates the acidic or basic nature of a solution. Higher the hydronium ion concentration, lower is the Ph value.

- 1) Which one of the following will have the highest hydrogen ion concentration?
 - a) $\text{pH}=1.1$
 - b) $\text{pH}=3.3$
 - c) $\text{pH}=2.2$
 - d) $\text{pH}=4.4$
- 2) How is the hydrogen ion concentration and pH related to each other?
 - a) They are inversely proportional.
 - b) They are directly proportional.
 - c) They are equal.
 - d) They have no relation.
- 3) A basic solution could have a pH of-
 - a) 3

- b) 7
 - c) 5
 - d) 9
- 4) The table provides the pH of four solutions P, Q, R and S: Solution pH value P 2 Q 9 R 5 S 11 Which of the following correctly represents the solutions in increasing order of their hydronium ion concentration?
- a) $P > Q > R > S$
 - b) $P > S > Q > R$
 - c) Any other
- 5) If the pH of any solution is 13, then the color obtained on adding universal indicator to it will be:
- a) Red
 - b) Green
 - c) Orange
 - d) Purple

Q 25) Read the passage carefully and answer the following questions:-

The Ph value of any solution is a number which simply represents the acidity and basicity of that solution. The pH value of any solution is numerically equal to the logarithm of the inverse of the hydrogen ion(H^+) concentration.

- 1) The pH value for distilled water would be:
 - a) 5
 - b) 7
 - c) 6
 - d) 10
- 2) Using above picture can you predict the colour of Ph paper when dipped in limejuice:
 - a) Dark Red
 - b) Green
 - c) Light Orange
 - d) Blue
- 3) The nature of toothpaste is:
 - a) Neutral
 - b) Basic
 - c) Acidic
 - d) Can be acidic or basic
- 4) If a solution gives dark blue color and water is added to it, its color will become:
 - a) Dark blue
 - b) Light blue to green
 - c) Red
 - d) Purple
- 5) Universal indicator strip gives green colour when put in our mouth before eating food. This indicates that:
 - a) The pH of saliva is basic in nature
 - b) The pH of saliva is near neutral
 - c) Saliva is acidic in nature
 - d) All are in correct

Biology

Q 26) Read the passage carefully and answer the following questions:-

Carbon and energy requirements of the autotrophic organism are fulfilled by photosynthesis. It is the process by which autotrophs take in substances from the outside and convert them into stored forms of energy. This material is taken in the form of carbon dioxide and water which is converted into carbohydrates in the presence of sunlight and chlorophyll. Carbohydrates are utilised for providing energy to the plant.

- 1) Write a chemical reaction which occur during photosynthesis?
- 2) In which form of carbohydrates does the plant stored in them?
- 3) What is stomata?
- 4) What are the functions of stomata?
- 5) What is Chloroplast?

Q 27) Read the passage carefully and answer the following questions:-

The alimentary canal is basically a long tube extending from the mouth to the anus. We can see that the tube has different parts. Various regions are specialised to perform different functions. We eat various types of food which has to pass through the same digestive tract. Naturally the food has to be processed to generate particles which are small and of the same texture. This is achieved by crushing the food with our teeth.

- 1) Which enzyme is present in our mouth to digest starch?
- 2) What are the types of enzymes released by our stomach?
- 3) Which is the longest part of our alimentary canal in our body?
- 4) What are villi?
- 5) What are the enzymes that are released by pancreas?

Q 28) Read the passage carefully and answer the following questions:-

The food material taken in during the process of nutrition is used in cells to provide energy for various life processes. Diverse organisms do this in different ways – some use oxygen to break-down glucose completely into carbon dioxide and water, some use other pathways that do not involve oxygen. In all cases, the first step is the break-down of glucose, a six-carbon molecule, into a three-carbon molecule called pyruvate. This process takes place in the cytoplasm.

- 1) What is anaerobic respiration?
- 2) Explain the process which happen in our muscle cells?
- 3) In which form our body used the energy?
- 4) Why there is a faster breathing rate of aquatic animals then the terrestrial animals?
- 5) Write the name of organ used for respiration by different organism- fish, frog?

Q 29) Read the passage carefully and answer the following questions:-

The excretory system of human beings includes a pair of kidneys, a pair of ureters, a urinary bladder and a urethra. Kidneys are located in the abdomen, one on either side of the backbone. Urine produced in the kidneys passes through the ureters into the urinary bladder where it is stored until it is released through the urethra.

- 1) What is the purpose of making urine?
- 2) What is Bowman's capsule?
- 3) What is dialysis?
- 4) What is the function of urinary bladder?
- 5) What are the different parts of nephrons?

Q 30) Read the passage carefully and answer the following questions:-

The heart is a muscular organ which is as big as our fist. Because both oxygen and carbon dioxide have to be transported by the blood, the heart has different chambers to prevent the oxygen-rich blood from mixing with the blood containing carbon dioxide. The carbon dioxide-rich blood has to reach the lungs for the carbon dioxide to be removed, and the oxygenated blood from the lungs has to be brought back to the heart. This oxygen-rich blood is then pumped to the rest of the body.

- 1) How many chambers are present in the heart of mammals and reptiles?
- 2) Who carry deoxygenated blood from body to heart?
- 3) What do you meant by the term double circulation?
- 4) What is hypertension?
- 5) Which device measured blood pressure?

Q 31) Read the passage carefully and answer the following questions:-

Plant transport systems will move energy stores from leaves and raw materials from roots. These two pathways are constructed as independently organised conducting tubes. One, the xylem

moves water and minerals obtained from the soil. The other, phloem transports products of photosynthesis from the leaves where they are synthesised to other parts of the plant

- 1) **What are the different parts of xylem?**
- 2) **What do you mean by the term transpiration?**
- 3) **What are the advantages of transpiration?**
- 4) **What is translocation?**
- 5) **How does plant remove their waste product?**

Q 32) Read the passage carefully and answer the following questions:-

All living cells need nutrients, O₂, and other essential substances. Also, the waste and harmful substances need to be removed continuously for healthy functioning of cells. So, a well developed transport system is mandatory for living organisms. Complex organisms have special fluids within their bodies to transport such materials. Blood is the most commonly used body fluid by most of the higher organisms. Lymph also helps in the transport of certain substances.

- 1) **Which of the following does not exhibit phagocytic activity?**
 - a) Monocytes
 - b) Neutrophils
 - c) Basophil
 - d) Macrophage
- 2) **Amount of blood corpuscles is changed in dengue fever. One of the common symptoms observed in people infected with dengue fever is**
 - a) significant decrease in RBC count
 - b) significant decrease in WBC count
 - c) significant decrease in platelets count
 - d) significant increase in platelets count.
- 3) **Why are WBCs called soldiers of the body?**
 - a) They are capable of squeezing out of blood capillaries.
 - b) They are manufactured in bone marrow.
 - c) They fight against disease causing germs.
 - d) They have granular cytoplasm with lobed nucleus.
- 4) **Name the blood cells, whose reduction in number can cause clotting disorder, leading to excessive loss of blood from the body.**
 - a) Erythrocytes
 - b) Neutrophils
 - c) Leucocytes
 - d) Thrombocytes
- 5) **Which of the following is the correct feature of lymph?**
 - a) It is similar to the plasma of blood, but is colourless and contains less proteins.
 - b) It is similar to the WBCs of blood, but is colourless and contain more proteins.
 - c) It is similar to the RBCs of blood and red in colour.
 - d) It contains more fats.

Q 33) Read the passage carefully and answer the following questions:-

Heterotrophic nutrition is a mode of nutrition in which organisms obtain readymade organic food from outside sources. The organisms that depend upon outside sources for obtaining organic nutrients are called heterotrophs. Heterotrophic nutrition is of three types: saprophytic, parasitic and holozoic nutrition.

- 1) **In which of the following groups of organisms food material is broken outside the body and absorbed?**
 - a) Mushroom, green plants, Amoeba
 - b) Yeast, mushroom, bread mould
 - c) Paramecium, Amoeba, Cuscuta
 - d) Cuscuta, lice, tapeworm
- 2) **Which of the following is a parasite?**

- a) Yeast
 - b) Taenia
 - c) Amoeba
 - d) Earthworm
- 3) Which of the following is an example of saprotroph?
- a) Grass
 - b) Mushroom
 - c) Amoeba
 - d) Paramecium
- 4) Heterotrophic nutrition involves
- a) production of simple sugar from inorganic compounds
 - b) utilisation of chemical energy to prepare food
 - c) utilisation of energy obtained by plants
 - d) all of these.
- 5) In Paramecium, food enters the body through
- a) Mouth
 - b) Pseudopodia
 - c) Cilia
 - d) cytostome

Q 34) Read the passage carefully and answer the following questions:-

Rishi experienced muscular cramps during the training session for his upcoming football match. Mr. Sen, his coach advised him on a schedule of some aerobic exercises to overcome his problem of muscular cramps. Rishi followed his coach's advice and did not face the problem of muscular cramps again during his match.

- 1) Which life process is depicted by the above passage?
- a) Respiration
 - b) Digestion
 - c) Nutrition
 - d) Excretion
- 2) Lack of oxygen in muscles often leads to cramps due to
- a) Conversion of pyruvate to ethanol
 - b) Conversion of glucose to pyruvate
 - c) Conversion of pyruvate to glucose
 - d) Conversion of pyruvate to lactic acid
- 3) Lactic acid is produced by _____ respiration in yeast.
- a) aerobic
 - b) anaerobic
 - c) oxidative
 - d) none of these
- 4) Why there is an increase in lactic acid concentration in the blood at the beginning of the exercise?
- a) Lack of oxygen
 - b) Excess of oxygen
 - c) Lack of carbon dioxide
 - d) Excess of carbon dioxide
- 5) What else can be done for quick relief from muscular cramps ?
- a) Massage
 - b) by applying heating pad or an ice pack
 - c) painkillers
 - d) all of these

Q 35) Read the passage carefully and answer the following questions:-

TRANSPORT OF WATER AND MINERALS IN PLANTS : Plants absorb water and minerals by the roots. The roots have root hair. The root hair increase the surface area of the root for the absorption of water and mineral nutrients dissolved in water. The root hair is in contact with the water present between the soil particles. Plants have pipe-like vessels to transport water and nutrients from the soil. The vessels are made of special cells, forming the vascular tissue. A tissue is a group of cells that perform specialized function in an organism. The vascular tissue for the transport of water and nutrients in the plant is called the xylem. The xylem forms a continuous network of channels that connects roots to the leaves through the stem and branches and thus transports water to the entire plant. One thing is very interesting here that when gravity pulls everything downwards, then how the water can rise up against gravity. There are only two possibilities, either the water is being pushed from below or the water is being pulled from the top of the plant. Now the question is which force is strong. It is very similar to the principle behind the sipping of soft drink from a bottle with a straw.

- 1) Name the force responsible for upward pulling of water.
 - a) Gravitational force
 - b) Magnetic force
 - c) Muscular force
 - d) Suction pull
- 2) Group of cells that transport food in plants is called?
 - a) xylem
 - b) phloem
 - c) tissue
 - d) all of these
- 3) The process in which water is lost as water vapour from the aerial parts of the plants through stomata is called
 - a) evaporation
 - b) transpiration
 - c) translation
 - d) sucking
- 4) Plants wither when
 - a) xylem stops
 - b) the epidermis is removed
 - c) cortex is removed
 - d) phloem stops
- 5) What type of water absorption takes place in plants by the process of more transpiration?
 - a) Active absorption
 - b) Passive absorption
 - c) none of these
 - d) both A And b

Q 36) Read the passage carefully and answer the following questions:-

BLOOD: Blood transport food and waste materials in our bodies. It consists of plasma as a fluid medium. A pumping organ is required to push the blood around. The blood flows through the chambers of the organ in a specific manner and direction. While flowing throughout the body, blood exert a pressure against the wall or a vessel.

- 1) Which life process is depicted by the above passage?
 - a) Respiration
 - b) Digestion
 - c) Transportation
 - d) Excretion
- 2) Name the blood pumping organ.
 - a) Lungs
 - b) Heart

- c) Kidney
- d) Liver
- 3) Oxygenated blood from lungs enters left atrium through
 - a) Vena cava
 - b) Pulmonary artery
 - c) Pulmonary vein
 - d) Aorta
- 4) Deoxygenated blood leaves through the right ventricle through
 - a) Vena cava
 - b) Pulmonary artery
 - c) Pulmonary vein
 - d) Aorta
- 5) Which of the following statements is true about heart?
 - i) It is a hollow muscular organ.
 - ii) It is a four chambered having three atria and one ventricle.
 - iii) It has different chambers to prevent the oxygen - rich blood from mixing with the blood containing carbon dioxide.
 - iv) Arteries always carry blood away from the heart.
 - a) (i) and (ii)
 - b) (ii) and (iii)
 - c) (i), (ii) and (iii)
 - d) (i), (iii) and (iv)

Q 37) Read the passage carefully and answer the following questions:-

Excretion is a necessary life process both in plants and animals. Plants use a variety of techniques to get rid of waste material. For example, waste material may stored in the cell vacuoles or as a gum and resin, removed in the falling leaves, or excreted into the surrounding soil.

- i. Excretion is the removal of
 - a) Glucose
 - b) Salts
 - c) Amino acids
 - d) Metabolic wastes
- ii. Many plant waste products are stored in cellular _____
 - a) Enzymes
 - b) Vacuoles
 - c) Golgi bodies
 - d) Phloem
- iii. Plants excrete through
 - a) soil
 - b) transpiration
 - c) dead leaves
 - d) All of the above
- iv. The main waste products in plants is
 - a) Carbon dioxide
 - b) Water vapour
 - c) Oxygen
 - d) All of the above
- v. Function of xylem tissue is
 - a) Collection of food material
 - b) Conduction of absorbed water
 - c) To take out water from cells
 - d) All of the above

Q 38) Read the passage carefully and answer the following questions:-

Amoeba is an animal having no fixed shape ingests food particles by formation of temporary finger-like projections. The food vacuole inside amoeba breaks down the food into small and soluble molecules. The digested food is thrown out by the amoeba by the rupture of cell membrane and it goes on for the search of next food particle.

- 1) Which type of organism is Amoeba?
 - a) Unicellular
 - b) Microscopic
 - c) Multicellular
 - d) Both a and b
- 2) What are the temporary projections made in amoeba called ?
 - a) walking legs
 - b) limbs
 - c) Pseudopodia
 - d) None of the above
- 3) What type of nutrition is followed by amoeba?
 - a) Parasitic
 - b) Holozoic
 - c) Saprotrophic
 - d) Autotrophic
- 4) The process of throwing out of undigested food in Amoeba is called
 - a) Egestion
 - b) Digestion
 - c) Nutrition
 - d) None of the above
- 5) Give an example of organism which follows same mode of nutrition in amoeba.
 - a) Vertebrates
 - b) Fungi
 - c) Tapeworm
 - d) Cuscata plants

Q 39) Read the passage carefully and answer the following questions:-

Respiration is a metabolic process that occurs in all organisms. It is a biochemical process that occurs within the cells of organisms. Like other living organisms, plant also exchange gases with their environment. However, plants do not possess any transport system for the gases. Different parts of plants exchange gases independently. The gases move entirely by diffusion. Different parts of the plant respire at different rates. Energy liberated during oxidative breakdown of respiratory substrate is partly stored in ATP. The rest is dissipated as heat.

- 1) Name the two ways in which glucose is oxidized to provide energy in various organisms.
- 2) What advantages over an aquatic organism does a terrestrial organism have with regard to obtaining oxygen for respiration?
- 3) What are the different ways in which glucose is oxidized to provide energy in various organisms?
- 4) "All plants give out oxygen during day and carbon dioxide during the night". Do you agree with this statement? Give reason.
- 5) If a plant is releasing carbon dioxide and taking in oxygen during the day, does it mean that there is no photosynthesis occurring? Justify your answer.

Q 40) Read the passage carefully and answer the following questions:-

Excretion The purpose of making urine is to filter out waste products from the blood. Just as CO₂ is removed from the blood in the lungs, nitrogenous waste such as urea or uric acid are removed from blood in the kidneys. It is then no surprise that the basic filtration unit in the kidneys, like in the lungs, is a cluster of very thin-walled blood capillaries. Each capillary cluster in the kidney is associated with the cup-shaped end of a tube that collects the filtered urine. Each kidney has large numbers of these filtration units called nephrons packed close together. Some substances in the

initial filtrate, such as glucose, amino acids, salts and a major amount of water, are selectively re-absorbed as the urine flows along the tube. The amount of water reabsorbed depends on how much excess water there is in the body, and on how much of dissolved waste there is to be excreted

- 1) _____ is considered as the basic functional unit of the human kidney.
- 2) What is the other name of Artificial Kidney?
- 3) What is an artificial kidney?
- 4) Name the organelle in amoeba that performs excretion and osmoregulation.
- 5) Why the conversion of ammonia to urea is essential in human body?
- 6) "About 180 litres of filtrate is produced each day but only 1.5 of urine is excreted out" justify the statement.
- 7) What are the different substances excreted by plants?