LITERATURE

Q.1 Learn the following speeches from The Tempest and then write them down in your own words in a thick ruled notebook.

Act 1 Scene 2

-- Miranda's speech - lines 1 -- 13

-- Ariel's speech - lines 226-- 238

Act 2 Scene 1

-- Antonio's speech - lines 280-- 291

Act 2 Scene 2

-- Caliban's speech - lines 1 -- 17

Act 3 Scene 1

-- Ferdinand's speech- lines 46 -- 57

Act 3 Scene 3

-- Ariel's speech -- lines 64-- 94

Q.2. Note down all the songs in the play 'The Tempest'.

ENGLISH LANGUAGE

Following assignments to be done in a thick copy.

WEEK 1.

1. A village fair is very different from a city one. It is usually held annually and is connected with a religious festival or harvest. The purpose of this fair is usually trade and to exhibit and sell village handicrafts. Describe one such fair.

2. Write a twenty line poem which has the title As I sit back ….. . The rhyme scheme should be abcda , ababc , abcda ,ababc .

WEEK 2.

1. Your school has decided to organize Musical Show in the month of July. Write a proposal in not more than 150 words stating the steps you would take to organize a successful show.

2. Write an article on how you are spending quality time at home. Include all the activities that you do as a family and also paste a couple of pictures.

WEEK 3.

1. Which is the best online show (English) that you watched recently. Write a review of the show.

2. "Unseen they suffer, Unheard they cry, In agony they linger, In loneliness they die. " Discuss the plight of street animals today in the light of the above mentioned lines.

HISTORY

Week 1:
a) Watch any historical movie (Indian) and write a review in 500 words.

Week 2:
a) Comment on the "Importance of Women's Education in India". How would it contribute to the cause of Women Empowerment?

Week 3:
a) Paste pictures of various Social Reformers of India in the 19th Century and write about the reforms carried out by them.

PHYSICS

ELECTROSTATICS

1. Name the basic properties of electric charge.
2. What is meant by quantization of charge?
3. State S.l. unit of electric permittivity.
4. What is the effect of velocity on charge?
5. If a tiny particle is given a positive charge, does it mass increase or decrease?
6. What is the charge on Cu^{++}.
7. How many electron make up I coulomb of charge?
8. Define electric field strength and write ito unit.
9. What do you mean by the term 'electric dipole?
10. What in the value of absolute permittivity of a material whose relative permittivity is a.
11. Define Coulomb's law and write it in vector form.
12. If the distance between the two equal point charges is halved and their individual charges are doubled. What would top happen to the force between them.
13. A Conductor carries a charge - 9.6×10^{-17}c. How many free electrons are in excess on deficient on the conductor?
14. Two equal and similar charges q μc c separated by distance **r** repel each other with a force **f**. on adding +4μc to one and -4 μc to others, the force between them decreased to 0.8f. Find 'q'.
15. Two point charges + 9e and +e are placed at distance of 16 cm from each other, at what point between them should a third charge 'q' be placed so that remain in equilibrium?
NOTE: FOR ANY QUERY CONTACT RITESH SIR ON: 9415075123

ECONOMICS

1. Explain the various types of demand?
2. Differentiate between the following diagrammatically.
   a) Expansion and Increase in demand.
   b) Contraction and Decrease in demand.
3. Explain the Law of Equi Marginal Utility with the help of numerical example.
4. State the law of demand, explain it with the help of hypothetical schedule and graph, illustrate the individual and market demand graphically.
5. Explain the relationship between the total and marginal utility graphically.
6. Explain the consumer equilibrium through cardinal utility approach, graphically.

COMMERCE

FINANCING: BANKING LATEST TRENDS

Write short notes on the following:

1. Core Banking System
2. Transfer of funds through Real Time Gross Settlement (RTGS)
3. Transfer of funds through National Electronic Funds Transfer (NEFT)
4. Electronic Funds Transfer
5. Issue of Demand Drafts online meaning and features
6. E-Banking – Meaning and Features, Advantages and Disadvantages.
7. Mobile Banking - SMS Alerts, Transfer of Funds,
   Making Payments – Advantages and Disadvantages
8. Debit Cards
9. Credit Cards
10. ATM (Automated Teller Machine)
11. Difference between Debit card and credit card

ENVIRONMENTAL SCIENCE

Instructions for the students:

In a separate notebook complete the following assignments within a month.

- From crystal clear waters in the canals of Venice to dramatic falls in pollution levels in major cities, the Coronavirus pandemic has had a number of positive effects on the environment as millions across the world are placed under lockdown. Prepare an analysis of the impact of the Coronavirus lockdown on our environment. Paste the necessary pictures and graphs to support your analysis.

- **Environment and Pollution: Matching**

Select the proper terms listed below to match the statements that follow. Write the letter of the term in the blank.

a. biomagnification b. fauna c. thermal d. recycling e. sulfuric f. ecology g. biodegradable h. ozone i. natural resources j. phosphates k. sulfur dioxide l. eutrophication m. smog n. biotic o. flora p. abiotic q. fossil r. pesticides

1. _____Process by which wastes are converted into new products and materials.
2. _____The earth's materials that are used by living things for such needs as food, shelter, and manufacturing.
3. _____The toxic air-polluting gas that causes acid rain.

4. _____The term used to denote increasing concentration of pesticides and other pollutants in the food chain.

5. _____Term applied to wastes that break down into harmless substances when exposed to the environment.

6. _____The layer of the atmosphere thought to be breaking down because of air pollution.

7. _____A collective term for animals in the environment.

8. _____The study of the interaction of living organisms with their environment.

9. _____The nonliving factors of an organism's environment.

10. _____Chemicals used to kill unwanted insects.

11. _____Type of pollution in which water is heated.

12. _____A collective term for plants in the environment.

13. _____The acid in acid rain.

14. _____The living factors of an organism's environment.

15. _____Process that can lead to the death of a body of water from pollutants.

16. _____An environmental polluting agent found in some detergents.

17. _____Fog-like pollution caused by automobile emissions.

18. _____Types of fuel, such as coal, that cause air pollution when burned.

- **Quiz: Global Warming**

Complete the quiz on the environment below by circling the correct answer from the options provided.

1. Which of the following is a greenhouse gas that is released by human activities and speeds up global warming?
   a) Petroleum   b) Natural gas   c) Carbon dioxide   d) Nuclear power

2. Which of the following human activities does NOT release carbon dioxide into the atmosphere?
   a) Burning fossil fuels b) Fishing   c) Deforestation   d) Driving

3. As global warming continues, the intensity of what type of storm that hits coastlines is predicted to increase?
    a) Tornadoes   b) Hurricanes   c) Tsunamis   d) Earthquakes

4. Rising water temperatures is a result of global warming and may eventually increase sea levels due to the dissolving of what?
    a) Mountains   b) Wetlands   c) River beds   d) Glaciers

5. Which of the following is NOT a negative effect of global warming?
    a) Larger fish population   b) New infectious diseases
       c) Species extinction   d) Loss of coastal areas

6. What country emits the most carbon dioxide?
    a) China   b) United States   c) Russia   d) India

7. According to the Political Economy Research Institute, which of the following U.S. Forbes 500 companies is the worst air polluter?
    a) E.I. Du Pont de Nemours & Co.   b) Exxon-Mobil
       c) General Electric   d) Ford Motor Co.

8. As air pollution continues to be released into the atmosphere, what becomes more depleted, resulting in an increase of ultraviolet radiation on earth?
    a) Oceans   b) Rain forests   c) Ozone-layer   d) Carbon dioxide

9. What percentage of carbon dioxide that is emitted into the atmosphere is absorbed by the ocean?
    a) 40%   b) 35%   c) 70%   d) 50%

10. As carbon dioxide emissions increase, the ocean's ability to absorb carbon dioxide declines, resulting in a more acidic ocean. What species is the most at risk in acidic water?
    a) Coral   b) Plankton   c) Fish   d) Whales

- **Answer the following questions in detail**

a) What is sustainable development? Explain the basic principles of sustainable development.

b) What is Population Dynamics? Describe the various factors affecting birth rate and death rate.

c) Define conservation. Explain in-situ and ex-situ conservation.

d) Explain the various traditional rainwater harvesting systems.

e) Define food adulteration. Explain the different types of food adulteration. Mention the harmful effects of food adulteration.

f) Explain the following food preservation methods- low temperature, high temperature, drying, canning, preservation by salt and sugar.

BIOLOGY ASSINGMENT

INSTRUCTION FOR THE STUDENTS:

➢ Kindly take the help of internet and the previous years biology textbook to prepare your project.

➢ If a diagram is required then draw it with proper labelling.

➢ Use colourful pens or pencils to make the project innovative.

1. Study the reason behind the spread of COVID- 19, its symptoms and preventive measure of corona virus disease.
        (https://www.ncbi.nlm.nih.gov/books/NBK554776/)

2. Draw well labelled diagram of the following:
    a) Tobacco mosaic virus
    b) Bacteriophage

3. Write various type of pollution that affecting plant and human life. Give some measure of its control.
        (https://www.conserve-energy-future.com/pollutiontypes.php)

4. Give an account of the preventive measure taken to avoid the spread of contagious disease.

5. Write short notes on:
    a) Immune system
    b) Vaccine

6. Study the role of stem cell in medical treatment.

7. With reference to food chain , Study the term trophic level, ecological pyramid.
(http://www.cmfri.org.in/uploads_en/divisions/files/Trophic%20levels%20and%20Food%20chain.pdf)

8. Mention two specialties of the inheritance of sex-linked character. Give example of this disease caused due to sex-linked genes in man and study the inheritance of any one of them.

COMPUTER SCIENCE

Instructions for the students:
- **Do the following JAVA programs in a separate exercise book.**
- **Use proper comments in your programs wherever required.**
- **Make a variable description table with each program.**

Q1. Write a program to print all the prime palindrome numbers between the given ranges and also find the frequency. The range should not be more than 3000.

Prime Palindrome: A palindromic prime (sometimes called a palprime) is a prime number that is also a palindromic number. ... The first few decimal palindromic primes are: 2, 3, 5, 7, 11, 101, 131, 151, 181, 191, 313, 353, 373, 383, 727, 757, 787, 797, 919, 929.

Q2. Write a program to accept a sentence as input. The words in the string are to be separated by a blank. Each word must be in upper case. The sentence is terminated by either ".","!" or "?". Perform the following tasks:

(i)   Sentence (measured in words).
(ii)   Arrange the sentence in alphabetical order of the words.
Test your program with the sample data and some random data:
Example:
INPUT: NECESSITY IS THE MOTHER OF INVENTION.
OUTPUT: LENGTH: 6
            REARRANGED SENTENCE
            INVENTION IS MORTHER NECESSITY OF THE

Q3. Write a program to input a matrix and check whether the given matric is an identity matrix or not.
Identity Matrix: A square matrix in which all the elements of the principal diagonal are ones and all other elements are zeros.

1   0   0
0   1   0
0   0   1

Q4. Write a Program in Java to fill a square matrix of size n x n in a circular fashion (clockwise) with natural numbers from 1 to n^2 where n should be taken as input from the user.
For example: if n = 4, then n x n = 16, hence the array will be filled as given below.

1	2	3	4
12	13	14	5
11	16	15	6
10	9	8	7

Q5. Write a program to long integer data not less than 5 digits. Your program should reject, if data is less than 5digits and ask to re-enter the value. In the input, last four digits will be taken as year (the validity of the year should be checked that the year should be in the range from 1900 to 3000 both inclusive, otherwise the computer should reject the input and ask them to re-enter data again) and remaining digits as total number of days. Your program should display the output as actual date (using number of days extracted) followed by month name and actual year.

Test your program for the following and some random data.

Input: 802005
Output: 21 March 2005
Input: 2008
Output: Invalid date! Re-enter value not less than 5 digits

Q6. Write a program in Java to input a number and check whether the given number is an **Emirp number** or not.

An **Emirp number** is a prime number whose reverse is also prime.
For e.g: 13,167 etc.

Q7. Write a program to input a number and check whether the given number is a palindrome number or not.
If the number is palindrome then print an appropriate message otherwise print the nearest palindrome number.

Q8. Write a program to print all Unique digit number between the given range p and q where p<q.
A **Unique digit** number is a number which has no duplicate digits.
For e.g.: 123, 103, 46 etc.

Q9. A **Goldbach** number is a positive even integer that can be expressed as the sum of two odd primes.

Note: All even integer numbers greater than 4 are **Goldbach** numbers. Example: 6 = 3 + 3

      10 = 3 + 7

      10 = 5 + 5

      Hence, 6 has one odd prime pair 3 and 3. Similarly, 10 has two odd prime pairs, i.e. 3 and 7, 5 and 5.

Write a program to accept an even integer 'N' where N > 9 and N < 50. Find all the odd prime pairs whose sum is equal to the number 'N'.

Test your program with the following data and some random data:

Example 1:

      INPUT: N = 30

      OUTPUT: PRIME PAIRS ARE

      7, 23

      11, 19

      13, 17

      Example 2:

      INPUT: N = 17

      OUTPUT: INVALID INPUT, NUMBER IS ODD.

      Example 3:

      INPUT: N = 126

      OUTPUT: INVALID INPUT, NUMBER OUT OF RANGE.

Q10. Write a Program in Java to input a number and check whether it is a **Fascinating Number** or not.

Fascinating Numbers: Some numbers of 3 digits or more exhibit a very interesting property. The property is such that, when the number is multiplied by 2 and 3, and both these products are concatenated with the original number, all digits from 1 to 9 are present exactly once, regardless of the number of zeroes.

Let's understand the concept of Fascinating Number through the following example:

Consider the number 192,

192 x 1 = 192

192 x 2 = 384

192 x 3 = 576

Concatenating the results: **192384576**

It could be observed that '192384576' consists of all digits from 1 to 9 exactly once. Hence, it could be concluded that 192 is a Fascinating Number.

Some examples of fascinating Numbers are: 192, 219, 273, 327, 1902, 1920, and 2019 etc.

ACCOUNTS

CALCULATION OF INTEREST ON CAPITAL

1. **A** and **B** started business on 1ˢᵗ April, 2015 with capitals of ₹ 60,000 and ₹ 40,000 respectively. On the basis of the following details, you are required to calculate Interest on capital @ 9% p.a.

DATE	CAPITAL INTRODUCED		CAPITAL DRAWINGS		DRAWINGS	
	A	**B**	**A**	**B**	**A**	**B**
1ˢᵗ June	--	10,000	5,000	--	1,000	--
1ˢᵗ September	15,000	--	--	12,000	--	--
1ˢᵗ October	--	20,000	--	--	5,000	3,000
1ˢᵗ January	--	--	20,000	23,000	--	2,000
1ˢᵗ March	5,000	--	--	7,000	2,000	--

2. **A** is a partner in a firm and his capitals as on 31st March 2014, was ₹ 1,51,500 after the following adjustments

Partner	Additional Capital (Jan. 1, 2014) ₹	Capital Drawings (July 1, 2013) ₹	Drawings (Per month) ₹	Interest on Drawings ₹	Remuneration (Per month) ₹	Profit ₹
A	25,000	5,000	1,000	500	2,000	20,000

Calculate interest of capital @ 10% per annum if capital is maintained by Fixed Capital Method in following alternatives:
a) When capital is maintained under fixed capital method.
b) When capital is maintained under fluctuating capital method.

3. Arun and Barun are partners in a firm sharing profits and losses equally. Their capitals on 1st April, 2015 for ₹ 480000 and ₹ 540000. On 1st October, 2015, they decided that the total capital of the firm should be ₹ 10,00,000 to be contributed equally by both of them. According to the partnership deed interest on capital is allowed to the partners at rate of 6% per annum.

you are required to compute interest on capital for the year ended 31st March 2016.

CALCULATION OF INTEREST ON DRAWINGS

4. Gopal and Hari are partners in a firm. They withdrew ₹ 10,000 on 31st August and ₹ 15,000 on 1st November, 2014, respectively, for personal expenses. If interest on drawing is charged @ 15% p.a. Calculate the interest on the drawing of Gopal and Hari for the year ending 31st March, 2015.

5. Gopal is a partner in a firm. He withdrew ₹ 1,000 per month regularly for personal expenses. If interest on drawing is charged @ 10% p.a. Calculate the interest on the drawing of Gopal for the year ending 31st March, 2015.

<div align="center">**OR**</div>

Gopal is a partner in a firm. He withdrew ₹ 12,000 during the year for personal expenses. If interest on drawing is charged @ 10% p.a. Calculate the interest on the drawing of Gopal for the year ending 31st March, 2015.

6. Gopal is a partner in a firm. He withdrew ₹ 10,000 on 1st August, 2014, for personal expenses. If interest on drawing is charged @ 10%. Calculate the interest on the drawing of Gopal for the year ending 31st March, 2015.

<div align="center">**OR**</div>

Gopal is a partner in a firm. He withdrew ₹ 10,000 on 1st August, 2014, for personal expenses. If interest on drawing is charged at an <u>average</u> @ 10% p.a. Calculate the interest on the drawing of Gopal for the year ending 31st March, 2015.

7. Gopal is a partner in a firm. He withdrew ₹ 1,000 p. m. regularly on the first day of every month during the year for personal expenses. If interest on drawings is charged @ 10% p.a. Calculate the interest on drawings.

8. Gopal is a partner in a firm. He withdrew ₹ 1,000 p. m. regularly in the middle of every month during the year for personal expenses. If interest on drawings is charged @ 10% p.a. Calculate the interest on drawings.

9. Gopal is a partner in a firm. He withdrew ₹ 1,000 p. m. regularly at the end of every month during the year for personal expenses. If interest on drawings is charged @ 10% p.a. Calculate the interest on drawings.

10. Calculate the interest on drawings of Mr. Aditya @ 10% p.a. for the year ended 31st March, 2007, if drawings of ₹ 5,000 is made in the beginning of each quarter.

11. Calculate the interest on drawings of Mr. Aditya @ 10% p.a. for the year ended 31st March, 2007, if drawings of ₹ 5,000 is made at the end of each quarter.

12. **A**, **B** and **C** started business on 1st July, 2006. Calculate interest on drawings of Mr. A @ 10% p.a. for nine months ending 31st March, 2007, if he withdrew ₹ 1,000 p. m. in the beginning of every month.

13. **A**, **B** and **C** started business on 1st July, 2006. Calculate interest on drawings of Mr. A @ 10% p.a. for nine months ending 31st March, 2007, if he withdrew ₹ 1,000 p. m. in the middle of every month.

14. **A**, **B** and **C** started business on 1st July, 2006. Calculate interest on drawings of Mr. A @ 10% p.a. for nine months ending 31st March, 2007, if he withdrew ₹ 1,000 p. m. at the end of every month.

15. Mr. Ashok Gupta is a partner in a firm. Calculate interest on drawings @ 9% p.a. for the year ended on 31st March, 2010, on the basis of drawings made by him as follows:

Date of Drawings	₹
April 1	8,000
June 30	16,000
September 1	20,000
November 1	20,000

POLITICAL SCIENCE
(HUMANITIES)

- **Explain**
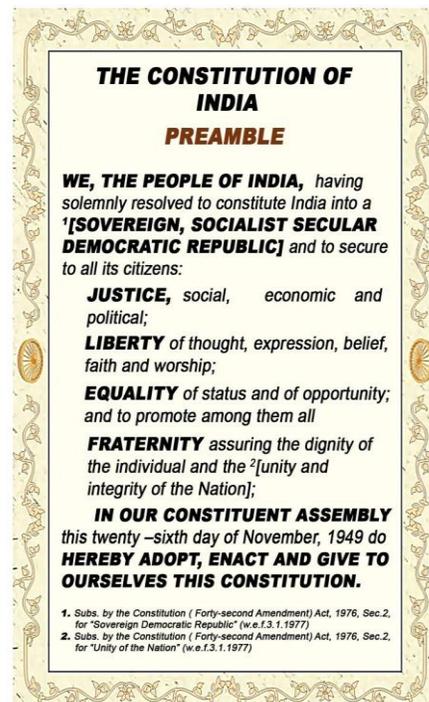 1. Role of Media in current era?

> ### Hints / Key Points
>
> - Media
> - Types
> - Role
> - As forth pillar of democracy.

- **Explain**
  2. (a) Sovereign (b) Socialist (c) Secular (d) Democratic (e) Republic (f) Justice (g) Liberty (h) Equality   (i) Fraternity
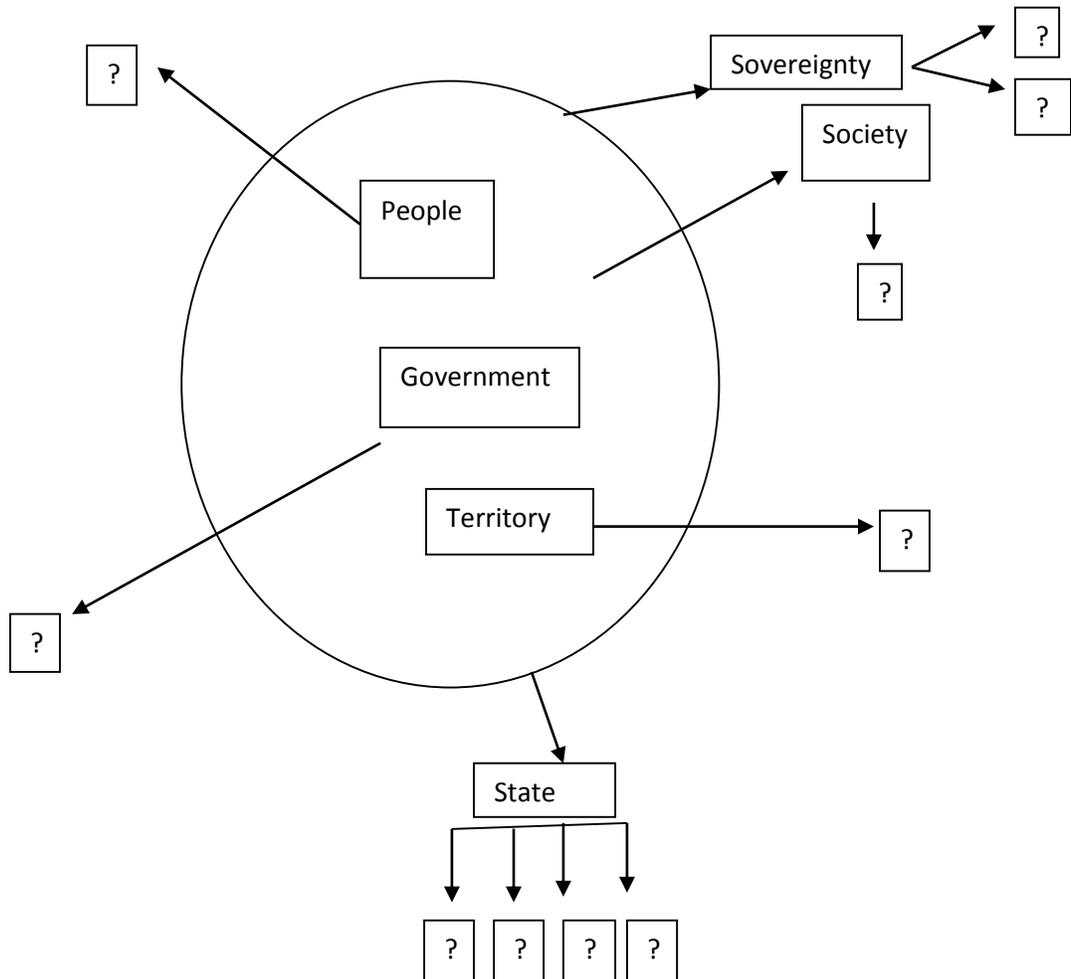
> ### Hints / Key Points
> Preamble
> The Constitution of India

- **Explain**
  3. Fundamental concepts of State.

- **<u>Few guidelines for the students :</u>**

(i)   Attempt any two questions.

(ii)   Try to explain the themes (answers) clearly and in context.

(iii)   Give the answers within the word limit of 2000 words each.

(iv)   Students may consult ***e-books*** as advised by the school and take help of ***internet***.

(v)   For any help regarding the assignments students may mail at :
        stpaulsschoolpolscdept@gmail.com

PSYCHOLOGY
(HUMANITIES)

Note for Students : Make a separate notebook and do the assignment in it.

➤ As COVID-19 pandemic sweeps across the world, it is causing widespread concern, fear and stress, all of which are natural and normal reactions to the changing and uncertain situation that everyone finds themselves in. So here is an assignment that includes some questions related to the current situation. Being a student of psychology try to answer these questions in a creative way.

Q1. Explain various subjective and cognitive (psychological) emotions of people during this quarantine.

> **Hint-**
>
> ❖ Discuss about different emotions people are going through.
> ❖ Discuss about people's perception towards Covid-19.
> ❖ Discuss the overall psychological impact of COVID-19.
> ❖ You can use different modes of media to know about effects of COVID-19.

Q2. Try to explain the causes and effects of stress among people during this Lockdown.

> **Hint-**
>
> ❖ **Discuss about the thoughts that has caused this stress among people.**
> ❖ **You can also add examples from your life like what exactly is making you feel stressful.**
> ❖ **You can use data from different modes of media to add about stress faced by people in different countries as well.**

Q3. Examine the helping behaviour shown by people during this lockdown

> **Hint-**
>
> ❖ **You can take examples worldwide to show how people are showing helping behaviour.**
> ❖ **Use of images/drawing/sketches showing helping behaviour can be done.**

Q4. What according to you can be different strategies of stress management?

<table>
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Hint-

You can include different strategies for different age groups. Like what type of strategies children can use & what type of strategies can be used by adults.

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</table>

❖ Try to be creative while writing your answers.

NOTE: - CHEMISTRY ASSIGNMENT WILL BE UPLOADED SOON.