ADARSH PUBLIC SCHOOL
C-BLOCK, VIKAS PURI, NEW DELHI
HOLIDAYS' HOMEWORK
SESSION : 2021-22
CLASS : XII

GENERAL INSTRUCTIONS

- **All the questions are compulsory.**
- **The holidays' homework must be done in a very neat and presentable manner.**
- **The child will be assessed on the basis of presentation, neatness, completion of all the given questions and timely submission.**
- **Revise all the syllabus covered in the class.**
- **The homework of all the subjects is to be done in respective notebooks or as specified.**

ENGLISH
A. Attempt all the questions mentioned below using creative measures:
1. **Make E-posters on any one of the following topics:**
   - Covid-19 outbreak (the sudden impact on people)
   - Covid-19 preventions and measures
   - Frontline Warriors and their struggles
   - Stay away from the virus not the victims
   - Help the needy during the Pandemic
2. **Make E-slogans on any two of the following topics:**
   - Health and Safety slogans
   - Motivate the Warriors
   - Do's and Don'ts : Coronavirus
   - Stay Positive, Stay Safe

   NOTE: *Use different pictures, colours and fonts.*

B. WRITING SKILLS
Q1. Write an article on each of the following topics given below in 150-200 words:
- Indian after ten years
- Non-availability of oxygen cylinders
- Role of students in eradicating illiteracy
- Grow more trees to reduce pollution
- Plight of coronavirus victims

Q2. Write a notice on the following topics given below in 50 words:
- While walking in a park in your neighbourhood you found a small plastic bag containing some documents and some cash. Write a notice in about 50 words to be put on the park notice board asking the owner to identify and collect it from you. You are Amar/Amrita.
- You are Asma/Ashish, the head girl/boy of XYZ international school. Your school is soon going to publish the annual magazine next month. Write a notice for the notice board of your school inviting students to submit write-ups.
- Arts Club of your school is going to organize a drawing and painting competition. Write a notice in not more than 50 words, to be displayed on the school notice board, inviting students to participate in it. Give all the necessary details. You are Rishabh/Ridhima, Secretary, Arts Club, Sunrise Public School, Gurugram, Haryana.

- An NGO has approached your school to offer book grants to the needy students. As head girl of Sunshine Public School, Aram Bagh, write a notice in about 50 words asking students who are in need to put their requests into the box kept outside the Principal's office.
- You are Raghav/Reema, Secretary of the cultural society of your school. Your society is organizing a dance drama "Gandhi - a Sage". Write a notice in about 50 words for the school noticeboard, informing the students about it with all necessary details.

Q3. Write a letter to the editor on the following questions in 120-150 words:
- You have realized the necessity of education and financial independence of women for their family, society and in turn for the nation. Write a letter to the Editor, 'The National Times' highlighting your ideas on the importance of education of women leading to a better status for them. You are Tarun/Taruna, B – 7/9, Mall Road, Delhi. (100 – 125 words)
- You are Kamini/Kamal of 10, Civil Lines Extension, Chanakyapuri, Agra. The main road leading to your locality has three open manholes causing frequent accidents at night, especially during the rainy season. Write a letter to the Editor, The Times of India, drawing attention of the Municipal Commissioner to this problem of the residents.
- You are Nitin/Natasha, a student of Class XII at K.P.N. Public School, Faridabad. Students are required to cope with a lot of pressure in today's competitive environment. Write a letter to the Editor of a national daily highlighting the increasing stress faced by students and suggest ways to combat the same.
- You are Sunil / Sunita, staying at Mayur Vihar, Delhi. Your locality being away from the main city, the poor bus-service adversely affects the life of the residents. Write a letter to the Editor of The Times of India, highlighting the problems faced, and also giving a few possible solutions.
- You are Aakanksha, Abhijeet staying in Kanishka, Cooperative Group Housing Society, Indira Nagar, Mumbai. There are no street lights on the main road leading to this colony. The road gets so dark after seven in the evenings in winter that the possibility of some major accident cannot be ruled out. Write a letter to the Editor of a national daily drawing attention of the government to this serious problem of the residents of Indira Nagar.

C. **Answer the following questions in 30-40 words:**
1. What did Franz wonder about when he entered the class that day?
2. Why has the poet brought in the image of the children 'spilling out of their homes'?
3. What, according to the author is 'Stamp Collecting'?
4. Why were some elderly persons occupying the back benches that day?
5. What do the parting words of the poet and her smile signify?
6. What happened with Charley at Grand Central Station?
7. Mention two things about M Hamel that surprised Franz on his last day at school.
8. How were the parents and M. Hamel responsible for the children's neglect of the French language?
9. But now we are both looking…. What does this refer to? Explain.
10. What was Kamala Das's childhood fear?
11. What was Charley's vision about Galesburg town?
12. What does M. Hamel say about the French language?
13. How does Kamala Das try to put away the thoughts of her ageing mother?
14. Why did Charley return from the third level?

15. What is the kind of pain and ache that the poet feels for her mother?
16. Franz was able to understand everything that day. Why?
17. Why has the mother been compared to the late winter's moon?
18. When and how did Charley find the letter of Sam?

D. Read the extracts given below and answer the questions that follow:

1. ……….but soon
   put that thought away and
   looked out at young
   trees sprinting, the merry children spilling
   out of their homes……………

   (a) What thought did the poet drive away from her mind?

   (b) What did she see when she looked out of the car?

   (c) How do you know that the joyful scene didn't help her drive away the painful

   thought from her mind?

   (d) What are the merry children symbolic of?

2. Driving from my parent's
   home to Cochin last Friday
   morning, I saw my mother, beside me
   doze, open mouthed, her face ashen like that '
   of a corpse and realised with pain .
   that she was as old as she looked …

   (a) Where was the poet driving to?

   (b) Why was her mother's face looking like that of a corpse?

   (c) What did the poet notice about her mother?

   (d) Why was the realisation painful?

E. Answer the following questions in 100-120 words:

1. What did the French teacher tell his students in his last French lesson? What impact did it

   have on them?

2. How does Charley make his description of the third level very realistic?

3. Give a character sketch of M. Hamel.

4. What is the central idea of the poem My Mother at Sixty Six?

5. Do you see an intersection of time and space in the story in the chapter The Third Level?

Go through the given referential link:

https://www.google.com/url?sa=t&source=web&rct=j&url=https://safetyrisk.net/safety-slogans/&ved=2ahUKEwiF2oaQuZnwAhVSfSsKHa5aC4wQFjAEegQIAxAG&usg=AOvVaw0SjsV7XoFJqmxgU7CRPbGG&ampcf=1&cshid=1619355538813

MATHEMATICS

1. If $\begin{bmatrix} 2x + y & 4x \\ 5x - 7 & 4x \end{bmatrix} = \begin{bmatrix} 7 & 7y - 13 \\ y & x + 6 \end{bmatrix}$, find $\times$ and y.

2. If $A = \begin{bmatrix} \cos \propto & -\sin \propto \\ \sin \propto & \cos \propto \end{bmatrix}$, then for what values of $\propto$ is A an identity matrix?

3. For a 2×2 matrix, $A = [aij], aij = \frac{i}{j}$, write value of a_{12}.

4. If $A = [aij]_{3 \times 3}$; $aij = \frac{1}{3}|-3i + j|$, write value of a_{23}.

5. Write the clement a_{12} of the matrix $A = [aij]_{2 \times 2}$; $a_{ij} = 2^{2ix} \sin jx$.

6. If $\begin{bmatrix} x + 2y & 3y \\ 4x & 2 \end{bmatrix} = \begin{bmatrix} 0 & -3 \\ 8 & 2 \end{bmatrix}$, find value of $x - y$.

7. If $A^T = \begin{bmatrix} 3 & 4 & -1 \\ 2 & 0 & 1 \end{bmatrix}$ & $B = \begin{bmatrix} -1 & 2 & 1 \\ 1 & 2 & 3 \end{bmatrix}$, then find $A^T - B^T$.

8. If $A = \begin{bmatrix} -1 & 2 & 4 \\ 0 & 3 & 1 \end{bmatrix}$, then find $(3A)^T$

9. If $A = \begin{bmatrix} 3 & -4 \\ 1 & -1 \end{bmatrix}$, express this as sum of symmetric & skew symmetric matrix.

10. If $A = \begin{bmatrix} 3 & 5 \\ 7 & 9 \end{bmatrix}$ is written as A = P + Q, where P is a symmetric matrix & Q is a skew – symmetric matrix, write matrix P.

11. If A is 3×3 matrix, then show that for any scalar K (non – zero) KA is invertible & find $(KA)^{-1}$

12. Construct a 3×2 matrix A, whose elements are given by $aij = \frac{(i+2j)^2}{2}$.

13. Simplify: $\cos \theta \begin{bmatrix} \cos \theta & \sin \theta \\ -\sin \theta & \cos \theta \end{bmatrix} + \sin\theta \begin{bmatrix} \sin \theta & -\cos \theta \\ \cos \theta & \sin \theta \end{bmatrix}$.

14. Find the value of K, if $M = \begin{bmatrix} 1 & 2 \\ 2 & 3 \end{bmatrix}$ & $M^2 - KM - I_2 = 0$.

15. If $A = \begin{bmatrix} 3 & -5 \\ -4 & 2 \end{bmatrix}$ & $f(x) = x^2 - 5x - 14$, find $f(A)$. Hence obtain A^{-1}.

16. If $A = \begin{bmatrix} 3 & -4 & 1 \\ 1 & 2 & 0 \end{bmatrix}$ & $B = \begin{bmatrix} 2 & 1 \\ 2 & 1 \\ 2 & 4 \end{bmatrix}$, then verify $(BA)^2 \neq B^2 A^2$.

17. If $(A - 2I)(A - 3I) = 0$, where $A = \begin{bmatrix} 4 & 2 \\ -1 & x \end{bmatrix}$ & $I = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$, then find the value of x.

18. If A is a square matrix such that $A^2 = A$, then find the value of $7A - (I + A)^3$, where I is the identity.

19. If $A = \begin{bmatrix} 1 & -1 & 0 \\ 2 & 5 & 3 \\ 0 & 2 & 1 \end{bmatrix}$, find A^{-1}.

20. If $A = \begin{bmatrix} 2 & 0 & 1 \\ 2 & 1 & 3 \\ 1 & -1 & 0 \end{bmatrix}$, find $A^2 - 5A + 4I$ and hence find a matrix $\times$ such that
$A^2 - 5A + 4I + \times = 0$.

21. Evaluate $\begin{vmatrix} \cos 15^o & \sin 15^0 \\ \sin 75^0 & \cos 75^0 \end{vmatrix}$.

22. If $x \in N$ & $\begin{vmatrix} x+3 & -2 \\ -3x & 2x \end{vmatrix} = 8$, find the value of x.

23. What positive value of x makes the following pair of determinants equal?
$\begin{vmatrix} 2x & 3 \\ 5 & x \end{vmatrix}$, $\begin{vmatrix} 16 & 3 \\ 5 & 2 \end{vmatrix}$

24. Write the cofactor of a_{12} in the determinant $\begin{vmatrix} 2 & -3 & 5 \\ 6 & 0 & 4 \\ 1 & 5 & -7 \end{vmatrix}$.

25. If A & B are square matrices of order 3, such that $|A| = -2$ & $|B| = 3$, find the value of $|-5AB|$.

26. If A is a square matrix of order 4 & $|A| = 6$, find $|-3A|$.

27. If A is any square matrix of order 3 & $|A| = 6$, find $|2A'|$.

28. Find K, if points $(K, 7), (1, -5)$ & $(-4, 5)$ are collinear.

29. If $A = \begin{bmatrix} 2 & 1 \\ 7 & 5 \end{bmatrix}$, find $|A \, adjA|$.

30. If $A = \begin{bmatrix} 2 & 5 \\ 1 & 3 \end{bmatrix}$, then write A^{-1}.

31. If $A = \begin{bmatrix} 2 & 3 \\ 1 & 4 \end{bmatrix}$, then show that $|3A| = 9|A|$.

32. Show that the points $(a + 5, a - 4), (a - 2, a + 3)$ & (a, a) do not lie on a straight line for any value of a.

33. If the area of the triangle with vertices (-3,0), (3,0)& $(0, K)$ is 9 sq. units, find K.

34. Prove if A is a skew-symmetric matrix of odd order n, then $|A| = 0$.

35. Examine whether or not the system of equations $x - y + z = 3, 2x + y - z = 2, x + 2y - 2z = -1$ is consistent. If consistent, solve it.

36. Using matrix method, solve the following system of linear equations:
$$2x + y + z = 1; x - 2y - z = \frac{3}{2} ; 3y - 5z = 9$$

37. An amount of Rs. 5,000 is invested in three investments at the rate of 6%, 7% & 8% p.a. respectively. The total annual incomes is Rs. 358. If the income from second investment is Rs. 10 more than the third investment, find the amount of each investment by matrix method.

38. Three hospitals A, B & C organised a vaccination drive. They provided vaccines such as Covishield, Covaxin & Sputnik V at a cost of Rs. 250, Rs. 200 & Rs. 300 each. The number of vaccines sold are given below:

Hospital / Vaccine	A	B	C
Covishield	40	25	35
Covaxin	50	40	50
Sputnik V	20	30	40

Find the revenue made by each hospital separately by selling these vaccines with the help of concept of Matrices. Also find the total revenue collected for the purpose.

39. A shopkeeper has 3 varities of Masks A, B & C. Meenu purchased 1 Mask of each variety for a total of Rs. 21. Jeen purchased 4 Masks of A variety, 3 Masks of B variety and 2 Masks of C variety for Rs. 60. While Shikha purchased 6 Masks of A variety, 2 Masks of B variety & 3 Masks of C variety for Rs 70. Using matrix method find the cost of each Mask.

40. Extract the data of covid cases month wise starting from January 2021 to April 2021 through online sources . The parameters to be found out is as follows :
No of covid cases , Recovered , deaths. Convert into Matrix of 3x1 where rows are parameters and column are months. Find sum of matrix and interpret the data. Also form a pie chart & bar graph. Make a report of 500 words on Analysis Of Covid-19 in India.

NOTE : Do Question numbers 38 , 39 and 40 in Maths Activities File under the Topic : Art Integrated Project. Go through the following referential links :

http://www.youtube.com/watch?v=dNPex98HwLs
https://www.youtube.com/watch?v=gEOJXNVnLVA

PHYSICS

A. Do the NCERT questions 1-24 of chapter 1 in your fair register.

B. Complete your practical file. Refer to the given link :

   http://www.olabs.edu.in/?pg=topMenu&id=40

C. **Do any one of the following activities for Physics AIL (Art Integrated Learning) Project.**

   1. Make a 5 min Video/ PPT (with voice over) on the topic "Physics in Everyday Life" having these subthemes. (Individual/Group 2-4)

      (i)   Physics at home

      (ii)   Physics in hospital

      (iii)   Physics in amusement park

      (iv)   Physics on the road

      (v)   Physics in nature

      (vi)   Physics in warfare

      (vii)   Physics in sports.

   2. Draw/Paint a cartoon on physics having following subtheme (Individual)

      (i)   Physical quantities talking to each other.

      (ii)   Any law of physics being depicted

      (iii)   Scientist explaining his/her invention or discovery.

   3. Make a video of making an educational toy depicting clearly any concept of physics. (Individual)

   4. Rap Song on Physics (Individual/Group 2-4).

   5. Make a Brochure on Milky Way (Individual).

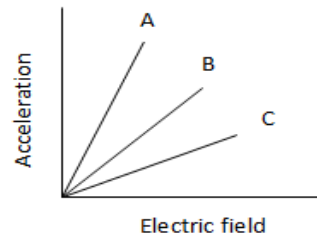   ****Links for your reference are given below:**

   > https://youtu.be/Eh0kyhEa8g8
   > https://youtu.be/jCe0MUHNVBU
   > https://youtu.be/943iWotAiDk

D. **Do the following assignment in your fair register.**

1. The Force between two point charges separated 'r' is F. what will be the force between point charges if (1) magnitude of one charge is doubled (2) separation distance is made $r/\sqrt{3}$ and $\sqrt{3}\ r$ (3) magnitude of both the charges is doubled and separation distance is also doubled.

2. Name the physical quantity whose SI unit is (1) C/V (2) N/C (3) J/C

3. The force between two point charges are placed in air is 40 N what will be the force between two charges when they are placed in a medium of dielectric constant 80?
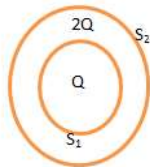
4. Sketch the electric lines of force due to point charges

   (i) $q<0$ (ii) $q>0$ (iii) $q_1+q_2=0$

5. Figure shows the variation of acceleration w.r.t. the electric field of three charged particles in a uniform electrostatic field. Which particle has which particle has the highest charge to mass ratio and why?
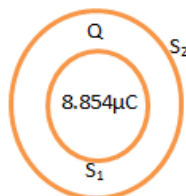

6. A test charge is moved from one point to another point on Equatorial plane of an electric dipole. Show that this point charge will not gain kinetic energy.

7. The Colombian forces acting between 2 electrons and 2 protons separated by definite distance are F_1 and F_2 respectively. Find the ratio of the two forces.

8. Two point charges of same magnitude exert a force of 2N on each other, on decreasing the distance between them by 0.05 m, the force becomes 18 N then:
   (i) What is the initial distance between the charges (ii) What is the value of each charge?

9. Why do 2 electric lines of force not intersect each other?

10. Define electric dipole moment. Mark two points around the dipole where the direction of electric field is (i) parallel and (ii) antiparallel to the direction of dipole moment.

11. A Gaussian surface encloses an electric dipole. What can you say about electric flux linked with the surface?

12. Work done in taking an electron around a proton in a close circular loop is zero. Should the proton necessarily be at the center of the circular loop?

13. In the electrostatic field of two point charges +Q and -Q are kept x distance apart, mark two points A and B which are at same potential.

14. The electric flux due to uniformly charged thin sheet at distance 5 cm $10Nm^2/C$. Calculate the electric flux due to same sheet at distance 10cm.

15. Give two differences between electric field due to mono charge and due to dipole.

16. Show that an electric dipole held in uniform electric field does not experience a force but it experiences a torque.

17. Show the variation (graphically) of electric field w.r.t. the distance of point due to (a) line charge distribution (b) uniformly charged vertical shell (c) uniformly charged thin sheet.

18. Calculate the number of electric lines of force passing through the spherical surface of radius 5cm, when (i) a point charge of magnitude 8.852 μC is placed at its center (ii) another same magnitude negative charge is placed at a distance of 2cm from the first charge (iii) another same magnitude negative charge is placed at a distance of 7.5cm from the first charge.

19. A sphere of radius r_1 encloses a charge Q. There is another concentric sphere S2 of radius r_2 $(r_2 > r_1)$. Find the ratio of electric flux through S_1 and S_2(i) if there is no additional charge between S_1 and S_2(ii) if there is an additional charge Q/2 between S_1 and S_2.

20. State Gauss's theorem. S_1 and S_2 are two hollow spheres enclosing charges Q and 2Q respectively as shown in the figure: (i) what is the ratio of the electric flux through S_1 and S_2(ii) how will be the electric flux through the sphere S_1 change if the medium of dielectric constant K is introduced in the space inside S_1 in place of air?

21. A point charge of 6 μCis kept inside us spherical shell of radius 6cm. Calculate the electric flux linked with surface of sphere.(i) when it's area is doubled (ii) another charge of magnitude -6μC is placed at a distance (a) 3cm and (b) 8cm from the centre of the sphere.

22. Two hollow spheres S_1 and S_2 are enclosing the charges 8.854μC and Q respectively as shown in figure. If the ratio of the electric flux through S_1 and S_2 is 1/3 then, calculate the magnitude of charge Q.

CHEMISTRY

A. Answer the following questions:

1) "Dissolution and crystallization process are in dynamic equilibrium". Explain this statement.

2) a. State Raoult's law for a solution containing volatile liquids.

   b. Derive Raoult's law.

3) A 5% solution (by mass) of cane sugar in water has a freezing point of 271 K. Calculate the freezing point of 5% solution (by mass) of glucose in water. The freezing point of pure water is 273.15 K.

4) Differentiate between ideal and non-ideal solutions.

5) Non-ideal solutions exhibits either positive or negative deviations from Raoult's law. What are these deviations and why are they caused? Explain with one example of each type.

6) What leads to anoxia and bends?

7) Determine the osmotic pressure of a solution prepared by dissolving 2.5×10^{-2} g of K_2SO_4 in 2 L of water at 25°C, assuming that it is completely dissociated.
   (R = 0.0821 L atm K^{-1} mol^{-1}, Molar mass of K_2SO_4 = 174 g mol^{-1})

8) Blood cells are isotonic with 0.9% sodium chloride solution. What happens if we place blood cells in a solution containing

   a. 1.2% sodium chloride solution?

   b. 0.4% sodium chloride solution?

9) What are colligative properties? Explain.

10) A solution prepared by dissolving 8.95 mg of a gene fragment in 35.0 mL of water has an osmotic pressure of 0.335 torr at 25°C. Assuming the gene fragment is a non-electrolyte, determine its molar mass

11) People suffer from edema when they consume a lot of salt or salty food. Why?

12) Why do we get abnormal molecular masses from colligative properties?

13) An aqueous solution of sodium chloride freezes below 273 K. Explain the lowering in freezing points of water with the help of a suitable diagram.

14) A solution prepared by dissolving 1.25 g of oil of winter green (methyl salicylate) in 99.0 g of benzene has a boiling point of 80.31°C. Determine the molar mass of this compound.
   (B.P. of pure benzene = 80.10°C and K_b for benzene = 2.53°C kg mol^{-1})

15) Some liquids on mixing form 'azeotropes'. What are 'azeotropes'?

16) a. Out of 1 M glucose and 2 M glucose, which one has a higher boiling point and why?

   b. What happens when the external pressure applied becomes more than the osmotic pressure of solution?

17) Differentiate between molality and molarity of a solution. What is the effect of change in temperature of a solution on its molality and molarity?

18) Derive the relationship between relative lowering of vapour pressure and molar mass of the solute.

19) A solution containing 15 g urea (molar mass = 60 g mol^{-1}) per litre of solution in water has the same osmotic pressure (isotonic) as a solution of glucose (molar mass = 180 g mol^{-1}) in water. Calculate the mass of glucose present in one litre of its solution.

20) Calculate the molarity of 9.8% (w/w) solution of H_2S0_4 if the density of the solution is 1.02 g mL^{-1} (Molar mass of H_2S0_4 = 98 g mol^{-1}).

B. Prepare an investigatory project on the topic mentioned below:

1. Study of the presence of oxalate ions in guava fruit at different stages of ripening.

2. Determination of caffeine in tea samples.

3. Study of quantity of casein present in different samples of milk.

4. To study the content of ascorbic acid in citrus fruit.

5. Preparation of soybean milk and its comparison with the natural milk with respect to curd formation, effect of temperature, etc.

6. Drug addiction and abuse

7. Study of the effect of Potassium Bisulphate as food preservative under various conditions (temperature, concentration, time, etc.)

8. Antacids

9. Study of digestion of starch by salivary amylase and effect of pH and temperature on it.

10. Study the effect of metal coupling on the rate of corrosions.

11. Comparative study of the rate of fermentation of following materials: wheat flour, gram flour, potato juice, carrot juice, etc.

12. Determination of the contents of the cold drink.

13. Extraction of essential oils present in Saunf (aniseed), Ajwain (carum), Illaichi (cardamom).

14. Soaps and detergents.

15. Study of common food adulterants in fat, oil, butter, sugar, turmeric power, chilli powder and pepper.

16. Measuring solubilities of saturated solutions.

17. To study the surface chemistry of colloidal solution.

C. Do ANY ONE of the following activities for Chemistry AIL (Art Integrated Learning) project.

1. Make a creative and informative PPT (with voice over) on any of the topic:

    a. Solid state (Imperfection in solids: defects)   b. Preparation of haloarenes

    c. Alcohols and phenols   d. Chemistry in everyday life

2. Make a POSTER on any of the following:

    a. Colloids   b. Surface chemistry   c. Chemical periodicity

3. Make a 3D model on Magnetic separation method or Stereoisomers (cis-trans)

4. Rap song on Periodic Table (Individual/Group of 2)

5. Draw a cartoon/picture to depict any concept of chemistry (Eg: types of chemical bond, versatile nature of hydrogen etc.)

**Links for your reference are given below:

      https://youtu.be/Z2RryHXO4iI
      https://youtu.be/7JwG2UoN0mg
      https://youtu.be/4ScEoT0fi6w

BIOLOGY

A) ANSWER THE FOLLOWING QUESTIONS -

I) Very short answer questions

1. Why do internodal segments of sugarcane fail to propagate vegetatively even when they are in contact with damp soil?

2. Why do we refer to offsprings formed by asexual method of reproduction as clones?

3. Rearrange the following events of sexual reproduction in the sequence in which they occur in a flowering plant: embryogenesis, fertilisation, gametogenesis and pollination.

4. Name one oviparous and one viviparous animal.

5. What is Apomixis?

6. The number of chromosomes in the shoot tip cells of a maize plant is 20. What will be the number of chromosomes in the microspore mother cells of the same plant?

7. Which is the first diploid single cell that begins life?

8. In which of the following organisms is the fertilisation external?

    Bony fishes, ferns, frogs, birds

II) Short answer questions

9. How does the progeny formed from asexual reproduction differ from those formed by sexual reproduction?

10. What is Parthenogenesis?

11. Diagrammatically represent the asexual mode of reproduction in Amoeba.

12. Differentiate between Asexual and Sexual reproduction.

13. Cucurbits are monoecious. Justify the statement.

14. Differentiate between external and internal fertilisation.

15. Why have higher animals resorted to sexual reproduction in spite of its complexity?

16. Differentiate between gametogenesis and embryogenesis.

17. Differentiate between an annual and a biennial plant. Provide one example of each.

III) Long answer questions

18. Explain the following-

a) Pre Fertilisation events

b) Fertilisation events

c) Post Fertilisation events.

19. Describe the different types of asexual reproduction exhibited by unicellular organisms.

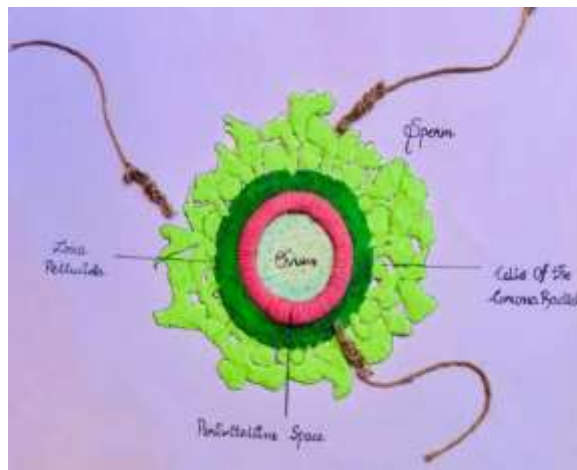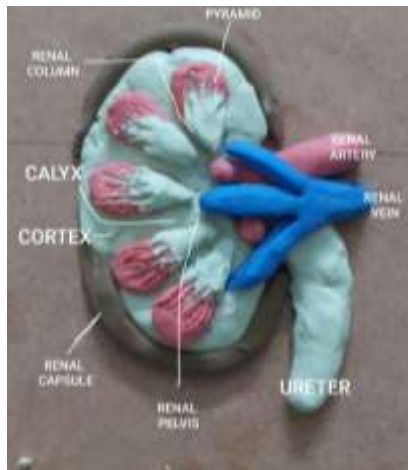20. The unicellular organisms which reproduce by binary fission are considered immortal. Justify.

B) Prepare a Investigatory Project on the topic mentioned below-(Roll no.1-13)

i) Biotechnology and its applications in medical science.

ii) Cardiovascular disorders

iii) IVF (In Vitro Fertilisation)

iv) Biological warfare

v) Covid-19 and its impact on society

vi) Mendelian disorders (Any Four)

vii) GMO (Genetically modified Organisms)

viii) Evolutionary history of human

ix) STDs (Sexually Transmitted Diseases)

x) Cancer (Types, causes, Prevention and Cure)

xi) Microbes in Human Welfare

xii) Biodiversity Conservation (Ex-Situ and In-Situ)

xiii) Chromosomal Disorders

C) Do any one of the following activities for Biology (Art Integrated Learning Project)

i) Make a PPT on the topic "Conservation of Biodiversity."

ii) Draw a cartoon on the topic "Reproduction in Plants and Animals."

iii) Collage making /Clay modelling/Drawing and Painting on the topic "Embryogenesis and Gametogenesis."

NOTE: Kindly refer the following samples for AIL Activity.

D) **Complete the Practical file (Experiment no.1-5) and refer the link for the biology experiments:** https://www.olabs.edu.in/
https://youtu.be/vzuVA-NRKWw

COMPUTER SCIENCE

Read chapters 12 & 13 thoroughly and do the following in Register:

1. **Write SQL commands to Create a table named Teacher with the structure as shown below and insert the required records in it. Also write the SQL commands to do the under stated.**

No	Name	Age	Department	Date_of_join	Salary	Sex
1	Jugal	34	Computer	10/01/97	12000	M
2	Sharmila	31	History	24/03/98	20000	F
3	Sandeep	32	Maths	12/12/96	30000	M
4	Sangeeta	35	History	01/07/99	40000	F
5	Rakesh	42	Maths	05/09/97	25000	M
6	Shyam	50	History	27/06/98	30000	M
7	Shiv Om	44	Computer	25/02/97	21000	M
8	Shalakha	33	Maths	31/07/97	20000	F

a) To show all information about the teacher of History department.

b) To list the names of female teachers who are in Maths department.

c) To list the names of all teachers with their date of joining in ascending order.

d) To display teacher's name, salary, age for male teachers only.

e) To count the number of teachers with Age>23.

f) To list the name and subject of the teachers who have their names starting with "S".

g) To display the details of all teachers in descending order of their salary.

h) To increase the salary of Maths Teachers by 500.

i) To delete the record of teacher with No as 7.

j) To add a new column named email in the table.

** Links for your reference :

https://youtu.be/wq1xGdebv5I

https://csiplearninghub.com/important-sql-queries/

2. **State the purpose of the following SQL functions with example of each:**

a) CONCAT()	d) ROUND()	g) DATE()
b) UCASE()	e) TRUNCATE()	h) COUNT()
c) SUBSTR()	f) NOW()	i) SUM()

3. **Write the Programs to do the following using Python programming language:**

a) Take a number N from the user and print the sum of odd numbers from 1 till the number N.

b) Take a list of 10 numbers from the user and print the square of all the numbers.

c) Take a string in lower case from the user and print the string after replacing each alternating character with capital letter.

d) Create a dictionary to store the Name and Number of Medals (NOM) of 5 players as Key value pairs (where Name and NOM are the keys and their values are stored in the form of the lists. Write statement to display the info of those players who have NOM less than 2.

e) Print the first 5 armstrong numbers available.

f) Print the 20 prime numbers available.

g) Find the count of vowels present in the string given by the user.

PSYCHOLOGY

A. <u>Answer the following questions (based on ch- 1):-</u>

1. _____ refers to distinctiveness & variations among people's characteristics & behavioral patterns.

2. "Sometimes I wonder how amazing it is to hear water flowing down the mountain, to admire the pattern formed while the birds are flying." Indicate which intelligence is referred to in these lines.

3. The mental age (MA) of an 8 year old child with an IQ of 110 is _____ years.

4. On being assessed for intelligence, Ronit scored high in social & emotional skills, self-reflection and collectivistic orientation. Which of the following statements is correct about Ronit's intelligence?

   a) Ronit is high in technological intelligence.

   b) Ronit is high in integral intelligence.

   c) Ronit lacks emotion.

5. The situationist perspective views human behavior as resulting from _____ factors.

6. _____ is the ability to produce ideas, objects or problem solutions that are novel and innovative.

7. Which factor influences more in developing Aptitude?

    a) Training   b) Age   c) Intelligence   d) Family

8. The notion of contextual/practical intelligence implies that intelligence is a product of _____.

9. Who gave the:

   a) Uni/one factor theory of intelligence

   b) Two factor theory of intelligence

   c) Theory of primary mental abilities

   d) Hierarchical model of intelligence

   e) Structure of intellect model

10. Distinguish between the following :

    a) Formal and informal assessment

    b) Interpersonal and intra-personal intelligence

    c) Simultaneous processing and successive processing

    d) Culture fair and culture bias tests

    e) Giftedness and talent

f) Individual and group tests

g) Creativity tests and intelligence tests

h) Psychometric approach and information processing approach

11. What are the methods used for Psychological Assessment?

12. Explain the diagnostic criteria for Mental Retardation.

13. Arjun has interest in machines but lacks Aptitude. He wants to become a mechanical engineer. Do you think he will be successful? State reasons for your answers.

14. Briefly describe some of the characteristics of gifted children.

15. Explain Intelligence in the Indian Tradition.

16. Define EQ. Briefly describe the characteristics of Emotionally Intelligent persons.

B. **Make a creative & informative 'e-project' on any one topic:**

1. Intellectual Deficiency
2. Theory of Multiple Intelligences
3. Emotional Intelligence
4. Psychological Attributes
5. Creativity & Intelligence

C. **Practical File:**

1. Complete- Introduction to Psychological Testing in your Psychology Practical File.

**Links for your reference : https://youtu.be/xllmlZLzb_U
https://youtu.be/64pctR2COmY
https://youtu.be/Odk885MW92g

ECONOMICS

Section A: Do the following assignment in your fair register.

1. How would you find out whether a particular expenditure is an expenditure on Intermediate goods or on Final goods?

2. Are the following Stocks or Flows?
   a. Investment
   b. A hundred rupee note.
   c. A family's consumption of sugar.
   d. Services of a tutor.
   e. Machinery of a sugar mill.
   f. Wealth
   g. Balance in a bank account
   h. Production of cement in the year 2018.
   i. Number of literate people as on 15.03.2021

3. Why is the flow of Income and Product called a 'Circular Flow'?

4. Giving reasons, classify the following into Intermediate & Final goods.
   a. Machines purchased by a dealer of machines
   b. Purchase of rice by a grocery shop.
   c. Chalks, dusters etc. purchased by a school.
   d. Printer purchased by a lawyer
   e. Seeds purchased for kitchen gardening.
   f. A car purchased by a household

5. What are the four factors of production & what are the remunerations to each of these called?

6. 'Machine purchased is always a Capital good'. Defend or refute the given statement with valid argument.

7. Will the following be included in domestic factor income of India?
   a. Profit earned by a foreign bank from its branches in India.
   b. Scholarships given by government of India.
   c. Profits earned by a resident of India from his company in Singapore.
   d. Salaries received by Indian residents working in American embassy in India.
   e. Profits earned by a branch of foreign bank in India.
   f. Profits earned by a branch of SBI in England.
   g. Profits earned by an Indian company fro, its branches in Singapore.
   h. Factor income from abroad.

8. "Net factor income from abroad can never be negative". Defend or Refute the given statement with valid argument.

9. "Final goods are those goods which are consumed only by the households". Defend or Refute the given statement with valid argument.

10. Calculate:
    a. Depreciation
    b. Subsidies
    c. NDPfc

Particulars	Rs in crores
a. GNP at FC	95,000
b. Indirect tax	14,000
c. NDP at MP	1,00,422
d. NNP at MP	1,00,000
e. GNP at MP	1,07,000

11. Mention the situations in which the following conditions will hold true:
    a. National income = Domestic income
    b. GDP at factor cost > GDP at market price.
    c. NNP at FC < NDP at FC.
    d. GDP at FC = GDP at MP.
    e. Domestic income is greater than National income.

12. Calculate NIT
    a. GNP at MP = 7000
    b. Domestic income or NDP at FC= 6200
    c. Depreciation = 600
    d. Net factor income from abroad = (-) 400

13. Explain how "Non-monetary exchanges" and "Externalities" are a limitation in taking GDP as an index of welfare.

14. Distinguish between Real and Nominal GDP.

15. Identify the following as Normal Residents of India:

    a. Indian employees working in the UNO office, located in America for less than 1 year.
    b. Indian Muslims going for the Haj pilgrimage.
    c. Indian employees working in WHO, located in India.
    d. Indian officials working in the Indian embassy in USA.

16. Give two examples of macro-economic studies.

17. Distinguish between

    a. Domestic product & national product
    b. Intermediates goods & final goods.
    c. Factor income & transfer receipts.

18. Define "Domestic territory" or "Economic territory".

19. Will the following be included in the national income of India? Give reasons.

    a. Financial help given to flood victims.
    b. Profits earned by an Indian bank from its branches abroad.
    c. Salaries paid to non-resident Indians working in Indian embassy in America.
    d. Interest received by an individual from banks.
    e. Profits earned by a foreign company in India.
    f. Scholarships received by a student.
    g. Money received from sale of shares.

20. What does "GDP Deflator" show? how is it estimated?

21. Suppose the GDP at market price of a country in a particular year was Rs 1,100 crores. Net Factor Income from Abroad was Rs 100 crores. The value of Indirect taxes – Subsidies was Rs 150 crores and National Income was Rs 850 crores. Calculate the aggregate value of depreciation.

22. How is nominal GNP converted into real GNP? Give example.

23. Explain circular flow of Income in a simple economy with diagram.

24. From the following data, calculate Personal Income and Personal Disposable Income.

NDP at FC	8000
NFIA	200
Undistributed Profit	1000
Corporate Tax	500
Interest received by households	1500
Interest paid by households	1200
Transfer income	300
Personal tax	500

Section B: **Do the following activities for economics AIL (Art integrated learning) project.**

1. Make a creative and informative E-project on any one topic: (13-15 slides)

   a. Inclusive growth strategy.

   b. Employment situation in India.

   c. Make in India- the way ahead.

   d. Import substitution vs export promotion.

   e. Digital India movement.

2. What is the impact of COVID-19 on Indian economy? Do the project using 15 to 20 A4 size sheets and support it with suitable pictures from newspapers or magazines.

3. Draw/paint a cartoon on economics having following subtheme:

   a. Any law of economics being depicted.

   b. Farmers protest on farm bills 2020.

   c. Jobless growth in the economy.

4. Click on the link given below, watch the video of the documentary "1232 kms" from hotstar and answer the following questions:
   https://www.hotstar.com/in/movies/1232-kms/1260056599/watch

   a. What were the reasons that compelled the workers to undertake the longest journey of their lives?

   b. Explain the ways in which certain people helped the workers during their journey.

   c. Use your imagination to give suggestions to the government on formulating few set of policies that could help in improvising the condition of migrant labourers.

** Links for your reference :   https://youtu.be/ZRn9J3mQqgw

                 https://youtu.be/TlY8gJ9seqU

BUSINESS STUDIES

1. Discuss the role of marketing in a firm and in an economy.

2. What are the factors deciding the transportation need of a marketing firm?

3. Explain the need of storage in a marketing firm.

4. Mention the two major decisions areas under physical distribution.

5. Describe the   crucial decisions to be considered by a marketer in promotion of a product.

6. Explain with a suitable diagram the large number of factors affecting marketing decision.

7. How controllable factors become marketing tools?

8. Define the following terms:

    a) Product

    b) Extended Product

    c) Generic Name

    d) Brand Name

    e) Trade Mark

    f) Market Offer

9. Explain how a product is considered as a bundle of tangible and non-tangible attributes with suitable examples.

10. Mention the types of :

    a) Packaging

    b) Channels of distribution

11**. Explain different   types of products with their features and examples with the help of a suitable diagram.**

12. Discuss the marketing trends in the state of Sikkim. Use your imagination and creativity to express your findings using the process of art integration through power point presentations for the same.

** Links for reference :

    https://youtu.be/nilZrBqTT8Y

    https://youtu.be/P7pYW8i8Tvg

    https://youtu.be/_G5-MueQx7Q

ACCOUNTANCY

1. **Select the correct alternative:-**
a) Which of the following item is not a sub-head of Current Assets?
   i) Cash and Cash Equivalents
   ii) Trademarks
   iii) Short term Loans and Advances
   iv) Inventories
b) While preparing common size income statement, each item of income statement is expressed as a percentage of:
   i) Revenue from operations
   ii) Other income
   iii) Total income
   iv) Profit before tax
c) Comparison of value of one period with those of another period for the same firm is:
   i) Inter-firm comparison
   ii) Intra-firm comparison
   iii) Pattern Comparison
   iv) Trend Comparison
d) Which analysis is considered as static?
   i) Horizontal Analysis
   ii) Vertical Analysis
   iii) Internal Analysis
   iv) External Analysis
e) 'Public Deposit' appear in the company's Balance Sheet under the head /sub-head:
   i) Intangible Assets
   ii) Current Liabilities
   iii) Shareholders Fund
   iv) Non-Current Liabilities

2. **Answer the following questions:-**
a) What are Financial Statements?
b) Name the major head which appear in the Equity and Liabilities part of the Balance Sheet.
c) List three items that are shown under Other Current Assets.
d) Are Bank Charges shown as Finance Cost?
e) Give two areas of interest of management while analyzing the financial statements.

3. **State whether the following statements are True or False:**
a) A Balance Sheet is prepared for a particular period and not on a particular date.
b) Comparative Statements are the tools of Financial Statement Analysis.
c) Bills Receivables is shown as Trade Receivables in the Balance Sheet.
d) A company's Balance Sheet may be prepared in vertical or horizontal form.
e) Financial Statement analysis does not ignore qualitative elements.

4. **Fill in the blanks:**
   a) Statement of profit and loss is also known as _____.
   b) 'Prepaid Insurance' appears in the Balance Sheet of a company under the sub-head _____.
   c) _____ financial statement analysis is of the dynamic nature.
   d) In common size balance sheet, each item of balance sheet is expressed as a % of _____.
   e) Financial statement analysis ignores price level changes. It is its _____.

5. **Differentiate between :**
   a) Horizontal and Vertical Analysis.
   b) Inter – firm and Intra – firm Analysis.
   c) Reserve and Provision

6. Define Contingent Liability. Where is it shown in the Balance Sheet? Give an example of Contingent Liability.
7. What is meant by Analysis of Financial Statement? State any two objectives of such an analysis.
8. State any three advantages and three limitations of Analysis of Financial Statement.
9. **Explain the term 'Operating Cycle' with the help of a diagram.**
10. Name and explain different tools of Analysis of Financial Statement.
11. State the objectives of Comparative Financial Statement.
12. Identify different users of financial statements and elaborate their area of interest.
13. List any five items that are shown under Reserve and Surplus.

14. **Under which head and sub- heads will you show the following items in the Balance Sheet of a company as per Schedule III, Part I of Companies Act, 2013?**
    a. Securities Premium Reserve
    b. Interest accrued and due on secured loan
    c. Cash and Bank Balance
    d. Bank overdraft
    e. Building
    f. Computer software
    g. Sundry Debtors
    h. Sundry Creditors
    i. Premium on redemptions of Debentures
    j. Provision for tax

15. **Under which head following items of a non-financial company will be classified?**
    a. Interest earned on loan
    b. Printing and stationary expenses
    c. Goodwill written off
    d. Revenue from services rendered
    e. Profit on sale of investment

16. From the following information prepare Comparative Statement of Profit and Loss.

PARTICULARS	31/03/ 2021 ₹	31/03/ 2020 ₹
Revenue from Operations	16,00,000	10,00,000
Employees Benefit Expenses	10,00,000	5,00,000
Depreciation	40,000	80,000
Other Expenses	80,000	60,000
Tax Rate	40%	40%

17. From the following information prepare Common-Size Statement of Profit and Loss.

PARTICULARS	31/03/ 2021 ₹	31/03/ 2020 ₹
Revenue from Operations	20,00,000	15,00,000
Expenses	21,00,000	15,00,000
Other Income	10,00,000	4,00,000
Income Tax	50%	50%

18. From the following information prepare Comparative Balance Sheet.

PARTICULARS	31/3/2021 ₹	31/3/2020 ₹
EQUITY AND LIABILITY		
1. Share Holder's Fund		
Share capital	3,50,000	3,00,000
2. Non-Current Liabilities		
Long term borrowing	1,00,000	2,00,000
3. Current Liabilities		
Trade Payable	1,50,000	1,00,000
TOTAL	6,00,000	6,00,000
ASSETS		
1. Non – Current Assets		
Fixed Assets(tangible)	4,00,000	3,00,000
2. Current Assets		
Trade Receivable	2,00,000	3,00,000
TOTAL	6,00,000	6,00,000

19. From the following information prepare Common–Size Balance Sheet.

PARTICULARS	X LTD. ₹	Y LTD. ₹
EQUITY AND LIABILITY		
1. Share Holder's Fund		
a) Share capital	9,00,000	12,00,000
b) Reserve and Surplus	4,00,000	3,50,000
2. Current Liabilities		
Trade Payable	2,00,000	2,50,000
TOTAL	15,00,000	18,00,000
ASSETS		
1. Non – Current Assets		
Fixed Assets(tangible)	10,00,000	16,00,000
2. Current Assets		
Trade Receivable	5,00,000	2,00,000
TOTAL	15,00,000	18,00,000

20. Prepare a Power Point Presentation on the topic 'Financial Statements of a company' or 'Tools of Financial Statement Analysis'. Representing information with the help of suitable diagrams and informative flow charts. (15 Slides)

** **Links for your reference :** https://youtu.be/qX7x8m6snZc
https://youtu.be/w42Vns2Uoow

INFORMATICS PRACTICES
Do all the questions in the register

1.   Write SQL commands for the following queries based on the relation Teacher given below:

No	Name	Age	Department	Date_of_join	Salary	Sex
1	Jugal	34	Computer	10/01/97	12000	M
2	Sharmila	31	History	24/03/98	20000	F
3	Sandeep	32	Maths	12/12/96	30000	M
4	Sangeeta	35	History	01/07/99	40000	F
5	Rakesh	42	Maths	05/09/97	25000	M
6	Shyam	50	History	27/06/98	30000	M
7	ShivOm	44	Computer	25/02/97	21000	M
8	Shalakha	33	Maths	31/07/97	20000	F

a) To show all information about the teacher of History department.
b) To list the names of female teachers who are in Maths department.
c) To list the names of all teachers with their date of joining in ascending order.
d) To display teacher's name, salary, age for male teachers only.
e) To count the number of teachers with Age>23.

** Links for your reference :

https://youtu.be/wq1xGdebv5I
https://csiplearninghub.com/important-sql-queries/

2. Define the following functions and give example of each
    a) Sqrt()
    b) Trim()
    c) Instr()
    d) Substr()
    e) Round()

3. Differentiate between the following:
    a) Having and Where Clauses used in Select command
    b) Update and Alter Commands
    c) Delete and Drop Commands
    d) DDL and DML Commands
    e) Primary Key and Foreign Key

4. Write the Python programs to do the following:
    a) To take number from user and print if it's an even number or not.
    b) To take a list of 5 numbers from user and print the reverse of list.
    c) To input principal amount, rate and time and calculate the simple interest.
    d) To input a string from user and print if it is palindrome.
    e) To input 2 strings from user and print the concatenated string.

5. **Design a beautiful Mind Map on Python programming language that may contain any concept in Python or combination of many concepts.**

POLITICAL SCIENCE

1 Who was the President of Cuba at the time of the Cuban missile crisis?

2 Mention the founder members of Non-Aligned Movement,

3 What was Bandung conference? When was it held?

4 When were atomic bombs dropped on the Japanese cities? What were the code names given

   to the bombs?

5 Write the following events in the proper sequence and mention the year of the event:

  a] NATO   b] Fall of Belin Wall

  c] Cuban Missile Crisis   d] Warsaw Pact

6 What do you mean by the term' logic of deterrence'?

7 Name the three arms control treaties signed in the 1960's between the two super powers.

8 Non-alignment is not isolationism nor believes in neutrality. Explain with examples.

9 **Mark on the political map of Europe three NATO members and three Warsaw Pact Members.**

10 **Explain the cartoons given on page number 9 drawn by well-known cartoonist Kutty depicting Indian view of the Cold War.**

11 Berlin Wall symbolized the division between---------------- and ---------------- world. Built in --------- to separate -------------- and ------------- and was finally broken by the people on --------------------------. This marked the unification of the two parts of ---------------.

12 Which three republics of the USSR made a declaration in December 1991 disbanding the Soviet Union?

13 Who was Mikhail Gorbachev? What did he try to do in USSR? Explain his economic and political reforms.

14 Mention major tensions and conflicts that took place in the former Soviet republics. What are their results?

15 The Arab Spring, is the people's revolution against injustice. Comment!

16 The declaration on the disintegration of the USSR and the formation of the CIS came as surprise to the other republics, especially to the Central Asian ones. Comment!

17 Write the full forms of: USSR, CIS, Baltic Republics, IMF, GDP.

18 Arrange the following in chronological order:

   a] Soviet invasion of Afghanistan

   b] Fall of the Belin Wall

   c] Disintegration of the Soviet Union

   d] Russian Revolution

19 **On the political map of the world mark the three countries belonging to Capitalist Bloc Communist Bloc and Non-Aligned Movement [Refer page 6]**

20 **Make a E-Project on any one of the following:**

   a] Environmental Concern and steps to protect

   b] Impact of Globalization in today's world

   c] Principle key agencies of UN – UNESCO, UNICEF, WHO, ILO, IMF, World Bank Depict through illustration.

   ** Referential Link: https://youtu.be/LYujpkF17dU
                            https://youtu.be/jo7ewe1wwgg

HISTORY

1. Mention the three periods of Harappan Civilisation?

2. What does the citadel include ? Discuss

3. Why the script of Indus people called enigmatic?

4. Fill in the blanks:

   a) Metals known to Harappan people-----------------------

   b) Crafts of Indus valley civilization---------------------

   c) Stone used to make weights---------

   d) Materials used for making seals--------

   e) Major sites discovered------------

5. Who was the first archaeologist to work in India?

6. What was the new technique followed by R.E.M Wheeler?

7. How did Harappans obtain red colour of carnelian?

8. Discuss the functions performed by the rulers in Harappan civilization?

9. Who is the father of Indian Archaeology?

10. Name two sacrifices performed by kings during the Vedic period?

11. Mention two Literary accounts of the Mauryan Period?

12. Define Megaliths.

13. Name five political centers of Mauryan Empire?

14. Who deciphered the Ashokan inscriptions?

15. What were Dharma Sutras?

16. What information the inscriptions of land grants convey?

17. Ashoka's Dhamma is relevant even today. How ?

18. What do you know about the Kushanas ?

19**. Cartographic skill:**

   On the political map of India mark

   a) The major Harappan sities

   b) The 16 mahajanpadas

20. **Make a creative and informative e-project on any one topic: (12-15 slides)**

   - Digging the mounds of Harappa.

   - Through the eyes of Travellers.

   - The great Epic of Mahabharata.

   - The Legendary Soul- GANDHI.

21. **Make a collage of Family Tree of the Mughals.**

** Link for your reference :   https://youtu.be/lAcMC2-2YQE
                              https://youtu.be/GKyW6jhw2O8

हिन्दी

प्रश्न 1 निम्न लिखित विषय पर विचार प्रस्तुत कीजिए

क) स्वास्थ्य रक्षा

ख) शिक्षा और खेल

ग) भ्रष्टाचार बनाम नेता

प्रश्न २ निम्न लिखित विषय पर पत्र लिखिए ।

क) आपके घर बिजली का भारी भरकम बिल आ गया है। आप दिल्ली बिजली बोर्ड के अधिकारी

को पत्र लिखकर उन्हें अपनी समस्या से अवगत कराइए ।

ख) पंजाब केसरी के संपादक के नाम पत्र लिखिए जिसमें बच्चों पर बस्तों का बोझ कम करने की

अपील की गई हो।

ग) सार्वजनिक पुस्तकालय खोलने की प्रार्थना करते हुए शिक्षा विभाग के सचिव को पत्र लिखिए।

प्रश्न3 निम्न लिखित विषय पर आलेख लिखिए ।

क) कैसे बढ़ाया जाए आत्म विश्वास ।

ख) शिक्षा और व्यवसाय

प्रश्न4 निम्नलिखित विषय पर फीचर लिखिए ।

क) मज़दूरों का पलायन

ख) प्राण वायु कितनी आवश्यक ।

ग) बंगाल चुनाव और कोरोना महामारी

प्रश्न 5 **सिक्किम राज्य का साहित्य संस्कृति सभ्यता व लोक कला की सचित्र जानकारी एकत्रित कर सुंदर प्रोजेक्ट बनाइए ।**   https://youtu.be/lp-sqKDPiWo

प्रश्न6 पढ़ाए गए पाठों को पुनः पढ़िए तथा उनके लेखक व कवियों का संक्षिप्त जीवन परिचय लिखिए । सभी कार्य कार्य पुस्तिका में कीजिए।

PHYSICAL EDUCATION

- Maintain Record File
- Record File shall include:
    - Practical 1: Fitness test administration for all items.
    - Practical 2: Procedure for Asanas, Benefits & Contradiction for any two Asanas for each lifestyle disease.

S.U.P.W

- **G.K**

Since the second wave of Covid-19 has infected patients gasping for breath due to acute shortage of oxygen. Many organizations and forces are coming forward to help them. Make a ppt based on relevant data on the above mentioned topic (10 slides).

- **HEALTH & PHYSICAL EDUCATION**

Oxygen is energy for your vital organs, including your brain and nerves. Make a project based on how Yoga benefits in breathing and mental wellness. Use Microsoft Word and paste pictures of various exercise used in the Project (1000 words).

- **WORK EXPERIENCE**

Located in the foothills of the Himalaya, the beauty of Sikkim is absolutely breath taking. Make an E-newsletter based on its diverse culture, magnificent scenery and appetizing cuisine (10 Pages / slides of **Word / Powerpoint** to be submitted in the form of **PDF**).