STEPHENS

INTERNATIONAL PUBLIC SCHOOL

Holidays' Homework

Session – 2024-25

Class : 10th

Subject : English

Q1.   Read chapter-4 (FROM THE DIARY OF ANNE FRANK) and chapter-5 (FOOTPRINTS WITHOUT FEET) and summarize in your own words.

Q2.   Write a letter in about 120 words to be editor of National News Delhi about the scarcity of water in your locality suggesting ways to improve the position of water supply. You are Kunal/Karuna of Lane No. 4, East Ghaziabad.

Q3.   You are a resident of Shivaji Nagar, Pune. You are concerned about the increasing number of road mishaps in your city. Write a letter to the editor of a local magazine "Jan Chetna" highlighting the problem. Suggest measures regarding the same.

Q4.   Prepare a questionnaire and interview at least 10 people -your friends/ relatives/ neighbours. Collect information about the awareness related to global warming, how they are affected and what measures they have adopted to deal with it.

Q5.   Write an article/ a poem or a short story of your choice. The writing should be original, reflecting your imagination, creativity and writing skills.

विषय – हिन्दी

1. (क) अपने विद्यालय में होने वाले निःशुल्क स्वास्थ्य शिविर के आयोजन से संबंधित विज्ञापन तैयार करें।

   (ख) 'प्रेरणा कोचिंग सेंटर' के लिए 50 शब्दों में एक आकर्षक विज्ञापन तैयार करें।

   (ग) चित्रों सहित एक मौलिक कथा लिखिए जिसका आधार निम्नलिखित उक्ति हो–
   "मन के हारे हार, मन के जीते जीत।"

2. (क) आप विद्यालय के हिंदी संघ के सचिव हैं। अपने विद्यालय की प्रधानाचार्या को पत्र लिखिए जिसमें पुस्तकालय में हिन्दी की अच्छी पुस्तकें व पत्रिकाएँ मँगवाने के लिए निवेदन किया गया हो।

   (ख) सड़क परिवहन के प्रबंधक को बसों की दुर्दशा के लिए शिकायती पत्र लिखिए।

3. निम्नलिखित विषयों पर चित्रों सहित अनुच्छेद लिखें।

   (क) शिक्षक हमारे मार्ग दर्शक

   (ख) इंटरनेट : विज्ञान के चमत्कार

4. दिए गए प्रश्नों के उत्तर लिखते हुए सुंदर व आकर्षक फाइल तैयार करें।

Subject : Mathematics

Q1. Express the HCF of 468 and 222 as $468x + 222y$, where x and y are integers in two different ways.

Q2. Find the HCF of 81 and 237 and express it as a linear combination of 81 and 237.

Q3. Find the largest number which divides 245 and 1029 leaving remainder 5 in each case.

Q4. Find the least number which when divided by 12, 16, 24 and 36 leaves remainder 7 in each case.

Q5. Three tankers contain 403 litres, 434 litres and 465 litres of diesel respectively. Find the maximum capacity of a container that can measure the diesel of three containers exact number of times.

Q6. Express 3825 as a product of prime factors.

Q7. A circular field has a circumference of 360 km. Three cyclists start together and can cycle 48, 60 and 72 km a day, round the field. When will they meet again?

Q8. Prove that $7 - \sqrt{5}$ is an irrational number.

Q9. Show that there is no positive integer n for which $\sqrt{n-1} + \sqrt{n+1}$ is rational.

Q10. Find the quadratic polynomial whose zeroes are $2 - \sqrt{3}$ and $2 + \sqrt{3}$.

Q11. Find the quadratic polynomial whose sum and product of zeroes are $2 - \sqrt{3}$ and $2 + \sqrt{3}$ respectively.

Q12. Find the zeroes of $v^2 + 4\sqrt{3}v - 15$ and verify the relationship between the zeroes and the coefficients of the polynomial.

Q13. If one zero of the quadratic polynomial $(k - 1)x^2 + kx + 1$ is –3, find the value of k.

Q14. If α and β are the zeroes of the quadratic polynomial $x^2 - (k + 6)x + 2 (2k - 1)$,

Find the value of k if $\alpha + \beta = \dfrac{1}{2} \alpha\beta$

Q15. If α and β are the zeroes of the quadratic polynomial $f(x) = 6x^2 + x - 2$, then find the value of $\alpha^3 + \beta^3$.

Q16. Solve the following system of linear equations $4x - y = 4$ and $3x + 2y = 14$. Shade the region bounded by the above lines and the y-axis.

Q17. The sum of two natural numbers is 8 and the sum of their reciprocals is $\dfrac{8}{15}$. Find the numbers.

Q18. A two digit number is 4 more than 6 times the sum of its digit. If 18 is subtracted from the number the digits are reversed, find the number.

Q19. Two years ago, a man was five times as old as his son. Two years later, his age will be 8 more than three times the age of the son. Find the present ages of the man and his son?

Q20. Find the value of k, so that the following system of equations has a non-zero solution
$5x - 3y = 0$ and $2x + ky = 0$

ACTIVITIES (on practical file)
1. To draw the graph of a quadratic polynomial and observe its shape
2. To find the conditions for consistency and inconsistency for system of linear equations in two variables by graphical method

Subject : Science

PHYSICS

SECTION – A

A.   Very short answer type questions:-

Q1.   Which part of eye acts as a cable which connects the eye with the brain?

Q2.   A boy uses spectacles of focal length 60cm. Name the defect of vision he is suffering from. Which lens is used for the correction of this defect?

Q3.   Why is blind spot called so?

Q4.   An object placed 45cm from a lens forms an image on a screen placed 90 cm on the other side of the lens. Find its focal length.

05.   Do the incident and emergent ray coincide in the process of refraction through glass slab? Give reason.

B.   Short answer type questions:-

Q6.   Draw a labelled diagram to show dispersion of a beam of white light.

Q7.   State the role of ciliary muscles in accommodation.

Q8.   When a light ray passes obliquely through the atmosphere in an upward direction, how does its path generally change?

Q9.   Explain briefly the following day to day events:

(a) A swimming pool appears shallower than what it actually is.

(b) A convex lens can be used as a magnifier, but a concave lens cannot be.

(c) A convex mirror is used as a rear view mirror by the drivers of motor vehicles.

(d) A concave mirror is used by ENT specialists.

(e) A convex mirror is used as a reflector in street lamps.

C.   Long answer type questions:-

Q10.   (a)   List the parts of the human eye that control the amount of light entering into it.

(b)   Write the function of retina in human eye. Explain, how they perform this function.

Q11.   What is hypermetropia? State two causes with the help of ray diagram to show

(i)   eye defect

(ii)   correction of hypermetropia

Q12.   (i)   Two lenses have power of

(a)   +2D

(b)   –4D

Find power of the combination.

(ii)   An object is kept at a distance of 100 cm from each the above lenses. Find

(a)   Image distance

(b)   Magnification in each case

What is the nature and focal length of each lens?

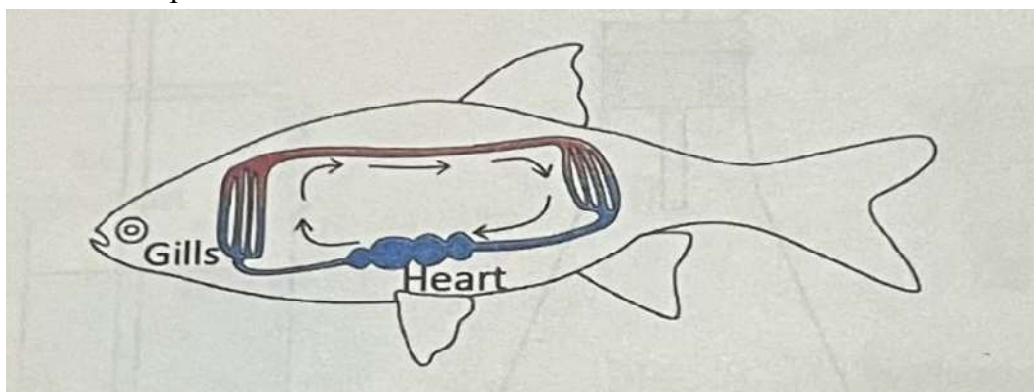**Write down the following practicals in your practical lab manual:-**

Q1.   Tracing the path of ray of light passing through a rectangular glass slab for different angles of incidence. Measure the angle of incidence, angle of refraction, angle of emergence and interpret the result.

Q2.   Determination of the focal length of concave mirror by obtaining the image of a distant object. (These practical should be done on lab manual only)

CHEMISTRY

Q1.   Read the chapter "Chemical reactions and equations" and "Acids, Bases and Salts". Prepare 20 questions along with answers (hard copy).

Q2.   Prepare a presentation the chemical composition of 10 common medicines and edible items (5 each). Presentation should be in hard copy.
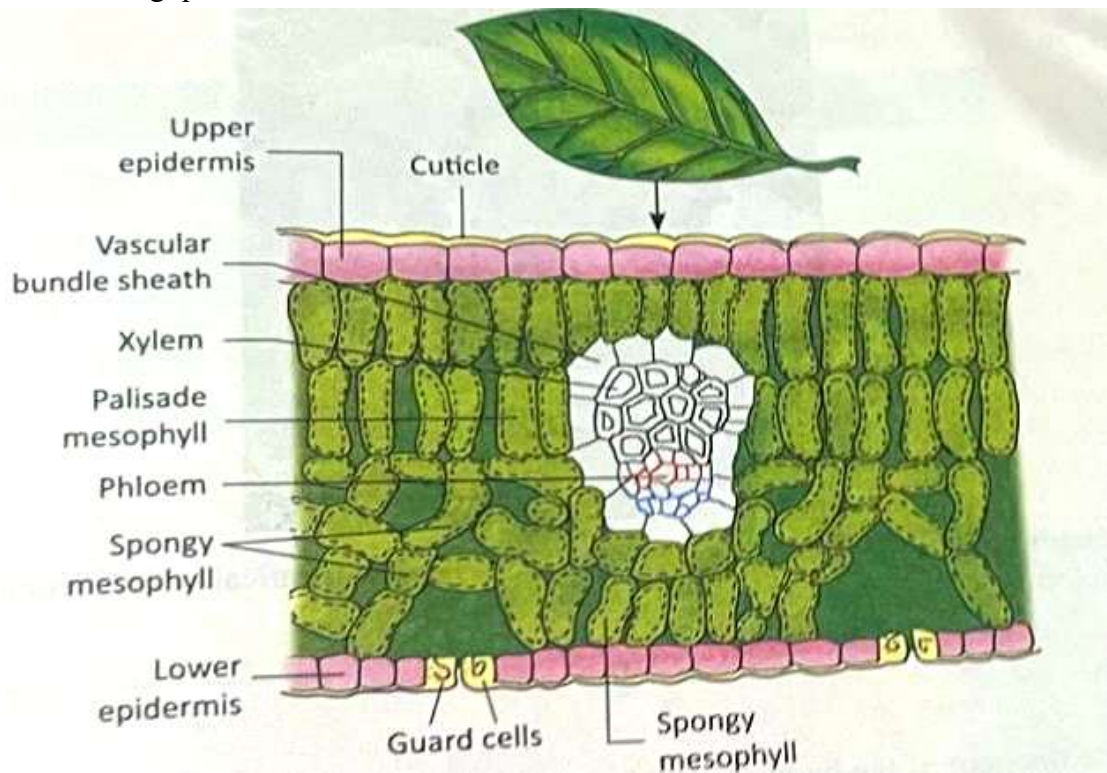
BIOLOGY

Q1.   Prepare the Concept Map of
   ➢ Nutrition in Human Beings
   ➢ Respiratory System in Human Beings
   ➢ Circulatory System in Human Beings
   ➢ Excretory system in Human Beings

Q2.   Analyse the diagram identify the type of blood circulation. Why it is named so? Explain it with the help of flow chart.

Q3.   Some animals ingest the whole food and breakdown it inside their bodies.
   (a)   Name the type of nutrition they show.
   (b)   Which factors influence this kind of nutrition?
   (c)   Give examples of animals that show this kind of nutrition.

Q4.   Blood pressure is the pressure exerted by the blood against the walls of the arteries due to pumping of heart.
   (a)   Why is blood pressure essential for the heart?
   (b)   What will happen in the absence of blood pressure?
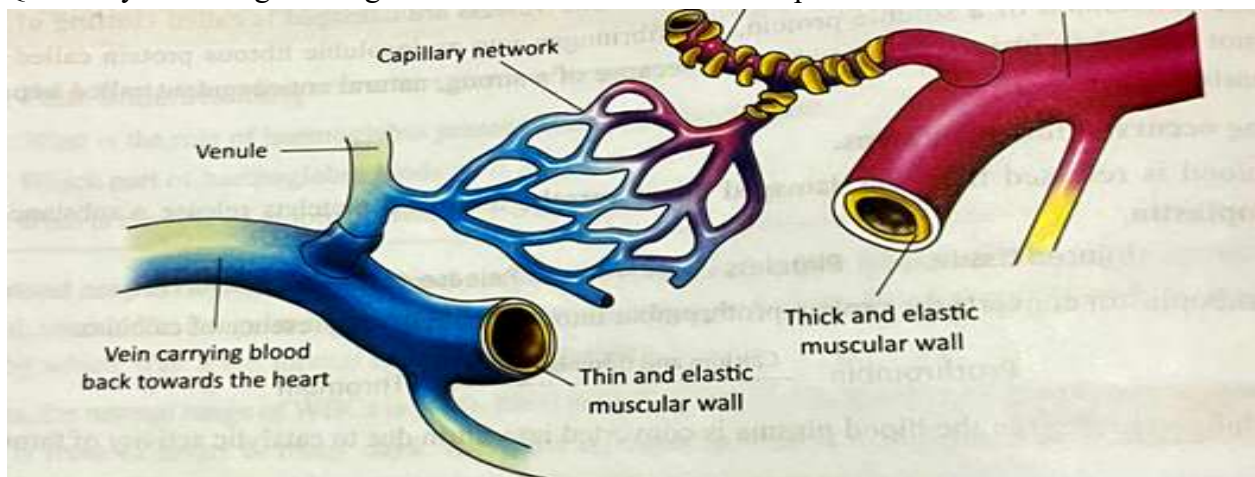   (c)   When is the person said to have high blood pressure or low blood pressure?

Q5. The diagram of the cross section of a leaf is given below. Observe it and answer the following questions.

1) Name the principal area of photosynthesis
2) Name the structures that regulate the opening and closing of stomata
3) Name the vascular tissue that transport materials to and from the leaf
4) What is the function of cuticle?
5) Name the outermost layer of leaf

Q6. By observing the diagram describe the interrelationship between blood vessels.

Q7. Draw the well labelled diagrams of
(a) Human Heart
(b) Double circulatory system
(c) Nephrons
(d) Respiratory System
(e) Human digestive System

Q8.   Fill in the blanks.
        (a) _____ process of filtration of blood in glomerulus under high pressure.
        (b) _____ process of utilisation of absorbed food by body.
        (c) _____ process of oxidation of glucose to Pyruvic acid.
        (d) _____ Blood circulates between heart and body organs except lungs.
        (e) _____ maintains osmoregulation.
Q9.   Patients whose gall bladder is removed are recommended to eat less oily food. Why?
Q10.   How is lymph an important fluid involved in transportation? If lymphatic vessels get blocked, how?

Subject : Social Science

A.   General Questions:-
Q1.   Write a newspaper report on
        (a)   Jallianwalla Baga Massacre
        (b)   The Simon Commission
Q2.   List all the different social groups which joined the Non-Cooperation Movement of 1921. Then choose any three and write about their hopes and struggles to show why they joined the movement.
Q3.   Find out about the participants in the National Movement who were captured and put to death by the British. Paste their pictures in your file.
Q4.   Mark and locate the following on the map of India.
        (a)   A place where the Congress Session was held in 1919.
        (b)   A place where the Congress Session was held in 1920.
        (c)   A place associated with the cotton mill workers Satyagraha.
Q5.   Prepare a short report on
        Case study of Grameen Bank of Bangladesh
Q6.   Prepare a detailed report on SHG's.
B.   Project Work
        1.   Prepare a detailed project report on any one of the following topics:-
                (a)   Consumer Awareness
                (b)   Social Issues
                (c)   Sustainable Development

Subject : Computer

Task1
Prepare a sales of 2022 and 2023 of the product: various kinds of laptops sold by various companies and consolidate the total sales of 2022-2023.

Task 2
Bharti wants to take loan of 2 Lakh to buy a car. Create 4 different scenarios of EMI and take print out of these scenarios and paste in a file.
Also if Bharti can pay only 8000 per month then calculate the rate of interest for this EMI.

Note:- Take print out of all the pages and compile it in a folder. Design an attractive cover for your file / folder.

Subject : Art

ART
Create a Folk Art Painting of your choice e.g. Mithila Painting, Warli Painting, Madhubani Painting, Mandala Painting etc.
Draw two landscapes in your drawing pad. Paint one of them using water colour and other one by using pencil shading.
CRAFT
Make a MDF board or canvas by using fevicryl clay colours and resin.