# STEPHENS

## INTERNATIONAL PUBLIC SCHOOL


# Holidays' Homework

## Session – 2021-22

# Class : 11th-A

# Subject : English

## Task – 1

**(A)** **(i)** As President of the Residents Welfare Association of Mayur Colony, Delhi, design a digital poster for promoting cleanliness in the surroundings of your colony.

**(ii)** You wish to open a showroom for 'Adidas' and are looking for a suitable place to purchase. Draft a digital advertisement for it to be published in 'The Tribune', New Delhi, under classified columns, giving all relevant details.

## Task – 2

**(B)** **Fill in the blanks with suitable determiners and modals.**

1. ……. you prepare a cup of tea for me, please?
2. She ……. not help to laugh at the joker.
3. We …….. execute your plan at once.
4. He said that he ……. walk twenty kms at a stretch.
5. A lame person ……. not walk.
6. The news ……. not be true.
7. With a little more effort we ……. win this time.
8. The examinations ……. be postponed.
9. We …….. have gone if they had invited us to dinner.
10. ……..... auditorium has been built in our school.
11. Honesty is …….. best policy.
12. The Ganges is …….. holy river.
13. Hari is ……. honourable man.
14. I saw ……. one-eyed sailor.
15. …… sun is bigger than …….. earth.
16. ……. umbrella is ……. useful thing.
17. This is …….. first time I have visited …….. big city.
18. This car can be driven at …….. speed of 180 kilometres …….. hour.
19. Mount Everest is …….. highest peak in …….. Himalayas.
20. He is a good boy …… father is a doctor.

## Task – 3

**(C)** **(i)** You have noticed many polythene bags full of litter lying along the road early in the morning. These litter bags cause pollution. You have already written to the concerned authorities, but no action has been taken so far. Write a letter to the Editor of a leading newspaper expressing your views on the nuisance created by plastic bags full of litter. Sign yourself as Parul/Prem Saxena, of B-22, Lajpat Nagar, New Delhi.

**(ii)** Hypocrisy exists in abundant measure in our society. People do not practise what they preach. They have double standards; are rude and dishonest but expect politeness and honesty from others. There are numerous examples of lack of sincerity in our daily experience. Write an article of 150-200 words showing how such behaviour causes disharmony at home, in the neighbourhood and at the work place. You are Harsha/Hrishit.

## Task – 4

**(D)** Read any short story book or novel and summarize it in the form of Power Point Presentation (slides). The slides must be in the following order:

- General information about the book.
- Author's description.
- Character's description.
- Summary of the story.
- Moral/ what you get from the story.

**Note –** You can include different pictures related to the text in the slides. Presentation in form of paragraph will not be accepted. It must be in points. The slides must not be more than 15.

- **WRITE ALL THESE EXPERIMENTS IN YOUR CANDID EVERGREEN LAB FILE IN SERIAL NUMBER AS GIVEN BELOW**
- **DONOT WRITE DATE AND ANY KIND OF OBSERVATIONS IN THE EXPERIMENTS.**

# Subject – Biology

**PART A (EXPERIMENTS):**

1. Study and describe the locally available common flowering plants, from any one family: solanaceae or lilliaceace including dissection and display of floral whorls, anther and ovary to show the number of chambers.
2. Study of distribution of stomata in the upper and lower surfaces of leaves.
3. Separation of plant pigments through paper chromatography

**PART B (SPOTTING):**

1. Parts of compound microscope.
2. Specimens/slides and indentification with reasons – bacteria, oscillatoria, spirogyra, rhizopus, pine.
3. Virtual specimens and identification features of – amoeba, hydra, liverfluke, ascaris, leech and earthworm.

# Subject – Chemistry

1. Crystallization of impure sample of potash alum.
2. Preparation of standard solution of oxalic acid.
3. Preparation of standard solution of sodium bicarbonate.

# Subject – Physics

1. To measure diameter of a given wire and thickness of a given sheet using screw gauge.
2. To find the weight of a given body using parallelogram law of vectors.
3. Using a simple pendulum, plot its L-$T^2$ graph and use it to find the effective length of second's pendulum.
4. To study variation of time period of a simple pendulum of a given length by taking bobs of same size but different masses and interpret the result.
5. To study the relationship between force of limiting friction and normal reaction and to find the co- efficient of friction between a block and a horizontal surface.

# Subject : Mathematics

## CHAPTER – SETS

**Definition**

Q1. Write the solution set of the equation $x^2 + x - 2 = 0$ in roster form.

Q2. Define equal sets. Explain with example.

Q3. Write down all the subsets of the following sets:

(i) $\phi$

(ii) {a, b}

(iii) {1, 2, 3}

Q4. Let. A = {a, b}, B= {a, b}. Is A subset of B. What is $A \cup B$?

Q5. In a committee, 50 people speak French, 20 speak Spanish and 10 speak both Spanish and French. How many speak at least one of these two languages?

Q6. Assume that P(A) = P(B). Show that A = B.

## CHAPTER – RELATION AND FUNCTION

Q1. The Cartesian product A Cross A has 9 elements among which are found (–1, 0) and (0, 1). Find the set A and the remaining elements of A Cross A.

Q2. Write the relation R = $\{(x, x^3) : x$ is a prime number less than 10$\}$ in roster form. Write its domain and range.

Q3. Draw the graph of the function $f$ : R to R defined by $f(x) = x^3$, $x \in$ R. Write its domain and range.

Q4. Let A = {9, 10, 11, 12, 13} and let $f$ : A to N be defined by $f(n)$ = the highest prime factor of $n$. Find the range of $f$.

## CHAPTER – COMPLEX NUMBERS

Q1. If $4x + i(3x - y) = 3 + i(-6)$, where $x$ and y are real numbers, then find the values of $x$ and y.

Q2. Find the multiplicative inverse of $4 - 3i$.

Q3. Represent $-1 - i$ in the polar form.

Q4. Solve: $x^2 + 3x + 5 = 0$

Q5. If $x + iy = \frac{a + ib}{a - ib}$, prove that $x^2 + y^2 = 1$.

## CHAPTER – TRIGONOMETRIC FUNCTIONS

Q1. The minute hand of a watch is 1.5 cm long. How far does its tip move in 40 minutes? Use $\pi = 3.14$

Q2. Find the values of other five trigonometric functions for $\tan x = \frac{-5}{12}$, $x$ lies in second quadrant.

Q3. Prove that $\cos 6x = 32\cos^6 x - 48\cos^4 x + 18\cos^2 x - 1$

Q4. Find the general solution for $\sin x + \sin 3x + \sin 5x = 0$

Q5. Prove that $\cos 2x \cos\frac{x}{2} - \cos 3x \cos\frac{9x}{2} = \sin 5x \sin\frac{5x}{2}$

# Subject : Physical and Health Education

**A. Prepare the project file on any one of the following games:-**

Athletics, Badminton, Boxing, Chess, Judo, Shooting, Skating, Swimming, Taekwondo, Tennis, Aerobics, Gymnastics, Rope-Skipping, Yoga, Bocce and Unified Basketball

**Project has to be written on the basis of following guidelines:-**

1. History of the game.
2. Draw the diagram of court/field of related game Specifications of playfield and sports equipments.
3. Latest general rules of the game.
4. Fundamental skills of the game.
5. Terminology
6. Important tournaments of related game

**B. Write down the current affairs related to sports of the year 2021.**

**C. Calculate the BMI of your family member and also state the category in which they fall.**

**D. Make a video of performing any 5 yoga asanas and explain its steps and benefits.**

# Subject : Applied Art

**PROJECT WORK**

1. Make a picture of Folk art on A3 size sheet (portfolio) using water colours or acrylic colours. (3 sheets)
2. Make a poster on safety measures of COVID-19 on A3 size sheet (portfolio) using acrylic colours. (3 sheets)

# Subject : Hindustani Music

**PROJECT WORK**

1. Paste pictures of various musical instruments on practical notebook and write in detail about the same.
   The following are the instruments which you can describe:
   Harmonium, Flute, Guitar, Ukulele, Violin, Mandolin, Banjo, Sitar, Tanpura, Santoor, Shehnai, Sarangi, Sarod, Dilruba, Pakhawaj, Swarmandal, Veena, Melodica, Piano, Tabla, Dholak, & Drums.
2. Description of prescribed Talas along with Tala Notation with Thah (Single) & Dugun (Double).
   (a) Teen Tala
   (b) Ek Tala

# Subject : Computer Science

**Research and read about the following:-**

**Computational Thinking and Programming – 1**

1. Introduction to problem solving
2. Steps for problem solving (analysing the problem, developing an algorithm, coding, testing and debugging).
3. Emerging trends: Cloud computing, cloud services (SaaS, IaaS, PaaS),
4. Blockchains, Artificial Intelligence (AI), Machine Learning (ML), Internet of Things (IoT)
5. Familiarization with the basics of Python programming
6. Introduction to Python
7. features of Python

**Society, Law and Ethics**

1. Digital Footprints
2. Digital society and Netizen: net etiquettes, communication etiquettes, social media etiquettes
3. Data protection
4. Cyber-crime
5. Cyber safety
6. E-waste management