

# STEPHENS INTERNATIONAL PUBLIC SCHOOL

Holidays' Homework for Class – 10<sup>th</sup> – 2019-20

## ENGLISH:

1. You are Sanya/Sourabh. Write an article in about 150 words on the title 'UFOs : Myth or Reality. You can take hints from the following notes.
  - (a) Common sighting
  - (b) Experience with naked human eye
  - (c) Discoveries and advancements
  - (d) Alien spaceships
  - (e) Disc shaped objects
2. Adoption of eco-friendly solar power consumption is the next step towards a greener nation. As a member of your schools science club, write an article in 150 – 200 words, discussing the advantages of solar energy and steps that can be taken for its promotion.
3. Write a story in 150 – 200 words based on the input given below.  
Travelling in metro — tunnel — lights went out — general panic pushing and shooing — screams — phone flashlights switched on an old man.
4. Write a story in (150 – 200) words beginning with the given line. Give it a suitable title. As I reached home, I realized that I had forgotten the keys. There was still an hour for my brother to turn-up. So I decided to go to the terrace.
5. Write a letter to the editor of a national newspaper regarding aerating awareness towards health and hygiene among rural people.
6. Influence of friends can have both positive and negative impact on the students. Write a letter to the editor of a national daily in 100 – 150 words discussing how we can make it positive and productive. You are Arun/Arina 24 Mall Road Chennai.
7. Do written practice of question answers of the literature part done so far in the class.

## HINDI

- प्र:1. निम्नलिखित विषयों पर आधारित अनुच्छेद लिखें।
- (क) भ्रष्टाचार
  - (ख) जहाँ चाह वहाँ राह
  - (ग) मित्रता
  - (घ) राष्ट्रभाषा हिन्दी
  - (च) राष्ट्र के प्रति विद्यार्थियों का कर्तव्य
- प्र:2. निम्नलिखित विषयों पर आकर्षक विज्ञापन तैयार करें।
- (क) मोबाइल फोन
  - (ख) जल
  - (ग) एक मासिक पत्रिका योग दिवस
- प्र:3. किन्हीं 25 मुहावरों को वाक्यों में इस प्रकार प्रयोग करें कि उनके अर्थ स्पष्ट हो जाएँ।
- प्र:4. हिन्दी के प्रसिद्ध कवियों का एक कोलॉज तैयार करें।

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## MATHEMATICS

- Q:1. Show that  $n^2 - 1$  is divisible by 8, if n is odd integer.
- Q:2. The LCM of two numbers is 14 times their HCF. The sum of LCM and HCF is 600. If one number is 280, find the other number.
- Q:3. Prove that  $\sqrt{3} - \sqrt{2}$  is irrational.
- Q:4. Write  $\frac{7}{80}$  in decimal form without division.
- Q:5. Solve:-  $a^2x^2 - 3abx + 2b^2 = 0$ , by the method of completing the squares.
- Q:6. Solve for x:  $x + \sqrt{x-2} = 4$
- Q:7. Solve for x:  $\sqrt{x^2 - 16} - (x-4) = \sqrt{x^2 - 5x + 4}$
- Q:8. Solve for x:  $\frac{4}{x} - 3 = \frac{5}{2x+3}$
- Q:9. For which condition the quadratic equation  $(a^2 + b^2)x^2 - 2(ac + bd)x + (c^2 + d^2) = 0$  has equal roots?
- Q:10. Solve for x:  $\frac{1}{a+b+x} = \frac{1}{a} + \frac{1}{b} + \frac{1}{x}$
- Q:11. If  $\alpha$ ,  $\beta$  and  $\gamma$  are the zeroes of  $6x^3 + 3x^2 - 5x + 1$ , find the value of  $\alpha^{-1} + \beta^{-1} + \gamma^{-1}$ .
- Q:12. Find the other two zeroes of the polynomial  $2x^4 + 7x^3 - 19x^2 - 14x + 30$ . If two of its zeroes are  $\sqrt{2}$  and  $-\sqrt{2}$ .
- Q:13. If the polynomial  $x^4 + x^3 + 8x^2 + ax + b$  is exactly divisible by  $x^2 + 1$ , find 'a' and 'b'.
- Q:14. If the polynomial  $6x^4 + 8x^3 + 17x^2 + 21x + 7$  is divided by  $3x^2 + 4x + 1$ , the remainder is  $ax + b$ , find 'a' and 'b'.
- Q:15. The sum of two numbers is 20 and sum of their reciprocals is  $\frac{5}{24}$ , find the numbers.
- Q:16. If  $2 \operatorname{cosec}^2 30^\circ + x \sin^2 60^\circ - \frac{3}{4} \tan^2 30^\circ = 10$ , find x.
- Q:17. Evaluate:-  $\cos^2 30^\circ + \sin^2 45^\circ - \frac{1}{3} \tan^2 60^\circ$ .
- Q:18. Prove that  $(1 + \tan \theta + \sec \theta)(1 + \cot \theta - \operatorname{cosec} \theta) = 2$ .
- Q:19. If  $2 \sin \theta - 1 = 0$ , prove that  $\sec \theta + \tan \theta = \sqrt{3}$ .
- Q:20. Prove that  $\sin^4 \theta + \cos^4 \theta = 1 - 2 \sin^2 \theta \cdot \cos^2 \theta$ .
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## SCIENCE

### Physics

**You have to prepare a project file (comprising blank sheets for diagrams and ruled sheets for theoretical answers)**

- Q:1. Draw ray diagrams to explain the image formation in the case of concave and convex mirrors.
- Q:2. Draw ray diagrams to explain the image formation in the case of concave and convex lenses.
- Q:3. Verify all the cases considered in Q1 and 2 by taking the focal length (of mirrors and lenses) as 20 cm and using the mirror formula, the lens formula and the formulae for magnification. Use an appropriate value for the distance of the object, u, depending upon the case chosen.
- Q:4. Draw a detailed and labeled diagram of the structure of the human eye.
- Q:5. Write the function of each part of the human eye.
- Q:6. Write a short note on each of the three defects of human eye mentioned in the textbook.
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## Chemistry

Q:1. Write and learn the following topics of chapter 'Acid, Bases & Salts.

- (i) Common salt
- (ii) Caustic soda
- (iii) Baking soda
- (iv) Bleaching powder
- (v) Washing soda
- (vi) Plaster of Paris

Preparation, properties and uses

Solve worksheet of chapter 2<sup>nd</sup> to be given

## Biology

Q:1. Revise the chapters done so far.

Q:2. Do the following questions.

- (i) Differentiate between transpiration and translocation.
- (ii) Differentiate between artery and vein.

Q:3. Draw a labelled diagram of human brain.

Q:4. Why is small intestine in herbivores longer than in carnivores?

Q:5. Complete three biology practicals in the science lab manual as directed by biology teacher.

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## SOCIAL SCIENCE

*Do this work on file*

Q:1. Discuss the importance of language and popular traditions in the creation of national identity.

Q:2. M. Satin wants to withdraw ₹ 20,000 in cash for making payments. How would he write a cheque to withdraw money? Paste the same cheque on the notebook.

Q:3. How many languages do we have in India? Name them. Prepare a map of linguistic diversity of India by shading the region where each of these languages is spoken (on the map of India).

Q:4. Prepare a project on the following topic. (**Any one**)

Consumer Awareness

OR

Social Issues

OR

Sustainable Development (on file)

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## Computer

Q:1. Revise unit II Web Applications (Basics)

Q:2. Do unit III Word Processing and unit IV Spreadsheet as you already done in the 9<sup>th</sup> class.

Q:3. Write all the activity related to word processing and spread sheet in the practical and paste pictures on it (pasted pictures should be taken screenshot from the computer or laptop. Don't paste pictures.

Q:4. Project work from the book.

(a) Create a work sheet displaying the pollution level in major Indian cities. (Page No. 406)

(b) Make a presentation from Page No. 408 and use all the feature of presentation. Both the project insert into the CD or DVD.

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*Note:- Learn the syllabus covered in the class.*