

STEPHENS INTERNATIONAL PUBLIC SCHOOL

Holidays' Homework for Class – 9th – 2019-20

ENGLISH:

Task – I

1. Write a descriptive paragraph based on the visual clue given below. (100 – 150 words)

Picture of APJ Abdul Kalam

2. Write a descriptive paragraph on International Yoga Day based on the clues given below. (100 – 150 words).

Celebrated on 21st June – UNs promotion of good health, harmony and peace – aims to raise awareness worldwide of the many benefits of practicing yoga.

Task – II

3. You went to see Taj Mahal on a trip organized by your school. You were spellbound to see the spectacular beauty of the monument but the lack of cleanliness around it disappointed you. Write a diary entry in 100 – 150 words expressing your admiration and your disappointment.
4. You are Peter, a student of class IX. In spite of being so young, you were given a chance to be a Radio Jockey for a day at a popular radio station of your city. Write a diary entry in 100 – 150 words showing your experience.

Task – III

5. Develop a story in 150 – 200 words with the following beginning.
Whenever John goes to Uncle Sam's house, he feels something different. He feels that Neil, Uncle Sam's son, has some supernatural powers whenever he is around _____.
6. Develop a story in 150 – 200 words using the following beginning. Also give a suitable title.
Once upon a time, there was a peacock that was enjoying _____.

Task – IV

(Course books)

Revise all the syllabus done in the class.

HINDI

- प्र1. किन्ही पाँच पर्वतारोहियों के चित्र चिपकाकर उनका जीवन परिचय लिखें।
- प्र2. साक्षरता अभियान से संबंधित विज्ञापन को 20–25 शब्दों में तैयार कीजिए।
- प्र3. 'अतिथि देवो भवः' उक्ति की व्याख्या करें तथा आधुनिक युग के संदर्भ में इसका आंकलन करें।
- प्र4. विभिन्न सांस्कृतिक नृत्यों से संबंधित पोशाकों को स्क्रेप बुक पर चिपकाएँ।
- प्र5. सियाराम शरण गुप्त द्वारा रचित कोई एक प्रसिद्ध कविता चित्र सहित लिखें।

MATHEMATICS

- Q:1. If $a^{\frac{1}{3}} + b^{\frac{1}{3}} + c^{\frac{1}{3}} = 0$, find the value of $(a + b + c)^3$.
- Q:2. Show that $0.2\overline{35}$ can be expressed in the $\frac{p}{q}$ form.
- Q:3. Factorize:- $x^3 - 23x^2 + 142x - 120$
- Q:4. Factorize:- $\left(2x + \frac{1}{3}\right)^2 - \left(x - \frac{1}{2}\right)^2$

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Q:5. If $a + b + c = 5$ and $ab + bc + ca = 10$, then prove that $a^3 + b^3 + c^3 - 3abc = -25$.

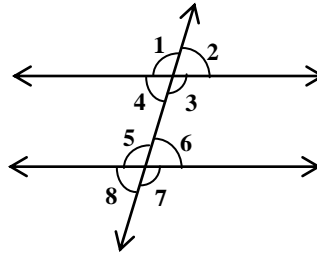
Q:6. If both $x - 2$ and $x - \frac{1}{2}$ are factors of $Px^2 + 5x + r$, show that $P = r$.

Q:7. Factorize:- $2\sqrt{2}a^3 + 8b^3 - 27c^3 + 18\sqrt{2}abc$.

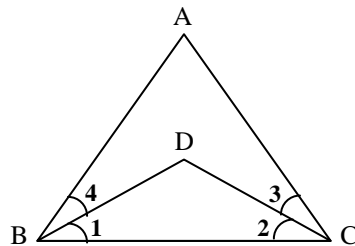
Q:8. If $a + b + c = 9$ and $ab + bc + ca = 26$, find $a^2 + b^2 + c^2$.

Q:9. Find at least 3 solutions for the following linear equation in two variables and draw a graph over it.
 $5x + 3y = 4$

Q:10. Mention all angles property in given figure.



Q:11. In figure, we have $\angle ABC$, $\angle ACB$, $\angle 3 = \angle 4$. Show that $\angle 1 = \angle 2$.



Q:12. If $x + 2a$ is a factor of $x^5 - 4a^2x^3 + 2x + 2a + 3$, find a .

Q:13. Factorise:- $84 - 2r - 2r^2$

Q:14. Expand:- $(-x + 2y - 3z)^2$

Q:15. Prove that $(a + b + c)^3 - a^3 - b^3 - c^3 = 3(a + b)(b + c)(c + a)$.

Q:16. Factorise:- $1 - 64a^3 - 12a + 48a^2$

Q:17. Expand:- $\left(\frac{1}{x} + \frac{4}{3}\right)^3$

Q:18. Draw the graph of the linear equation $3x + 4y = 6$. At what points, the graph cuts the x -axis and the y -axis.

Q:19. Find the value of a and b

$$\frac{7 + \sqrt{5}}{7 - \sqrt{5}} - \frac{7 - \sqrt{5}}{7 + \sqrt{5}} = a + \frac{7}{11}\sqrt{5}b$$

Q:20. Find the value of $\frac{4}{(216)^{-2/3}} + \frac{1}{(256)^{-3/4}} + \frac{2}{(243)^{-1/5}}$

Q:21. Make project i.e. locate $\sqrt{10}$ on chart paper by spiral method.

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SCIENCE

Physics

You have to prepare a project file (comprising blank sheets for diagrams, ruled sheets for theoretical answers and graph paper for graph work)

- Q:1. What is a speedometer? Locate and draw the diagram of a speedometer fitted on a vehicle? Keep a watch ready when you are travelling (by bike, scooter, bus, car etc). Prepare a record of the speed of the vehicle observed after regular intervals of time, say 5 seconds. Present this information in the form of a speed-time graph for a total period of 30 seconds. Compute the distance travelled by the vehicle from this graph. Compare it with the actual value of the distance.
- Q:2. Derive the three equations of motion graphically.
- Q:3. An athlete runs on a circular track of radius 35m with a speed of 27km per hour. Calculate the time taken to complete 3.5 rounds. Also calculate his net displacement at the end of 3.5 rounds.
- Q:4. State Newton's law of Gravitation. Write its mathematical expression. Write the SI unit of universal gravitational constant.
- Q:5. Write an experiment to demonstrate the law of reflection of sound.

Chemistry

Note:- The following questions are from chapter 2 of your textbook i.e. Is Matter Around Us Pure.

- Q:1. Write and learn different separation techniques for the separation of mixtures of chapter 2. Explain the techniques given with well labelled diagrams.
- (i) Decantation (ii) Filtration (iii) Sublimation
(iv) Distillation (v) Fractional Distillation (vi) Centrifugation
(viii) Crystallization
- Q:2. Write and learn all textual questions of chapter 2.

Biology

- Q:1. Make a PPT (Power point presentation) of cell – showing following organelles. Your PPT should contain a diagram of each of the following in one slide and then little explanation on second slide. (2 slides per organelle) save your PPT and bring a coloured printout.
- (a) Plasma Membrane (structure) (b) Nucleus
(c) Endoplasmic Reticulum (d) Golgi Apparatus
(e) Lysosomes (f) Mitochondria
(g) Plastids
- Q:2. Do the following in a scrap book.
- (a) Make a list of 10 endangered species of animals/birds their habitat and suggest ways to conserve them.
- (b) What are the reasons of being endangered?
- (c) Draw the diagram of longest cell in human body.
- (d) Draw and name cells according to their different shapes.
- (e) Look at the relationship and fill in the blanks:-
(i) Prokaryotic cell : bacteria : eukaryotic cell : _____
(ii) Paramecium : _____ :: fungi : multicellular
- (f) Make a detailed list of number of chromosomes in atleast 20 different organisms.

