BLS INTERNATIONAL SCHOOL, HATHRAS
SESSION 2019-2020
SUMMER HOLIDAY HOMEWORK

Dear Parents,

Summer vacations are synonymous with fun, frolic, getting up late in the morning, playing for longer hours with friends, going for picnics, watching fun filled shows on T.V. but there is a lot more you can do to make their vacations more interesting and meaningful. As parents, it is important to invest your time with them now.

- Look into the eyes of your little one and thank God for giving you such wonderful gift. In a few years from now, they will be soaring into greater heights.
- Allow your child to play outdoors, get hurt and get dirty. It's Okay for them to fall down and experience pain once in a while. Comfortable life within the sofa cushions will make your child lazy.
- Take them to relatives and friends to emphasize on how to meet & greet others.
- Allow them to adapt a pet, dog, a cat, a bird or a fish to understand the importance of life.
- Teach them a few folk songs and narrate stories or share your experiences which have some learning outcomes.
- Get some story books with colorful pictures and drawing materials for your kids.
- Keep your children away from TV, Mobile Phones, Computers and other electronic gadgets; they have their whole life for that.
- Avoid giving chocolates, jellies, cream cakes, chips, aerated drinks and too many bakery products like puffs and fried items like samosas.
- Encourage your child to cultivate the reading and writing habits.
- Converse with your child preferably in English to enhance communication skills.
- Assist your ward to complete the given home task before time.(H W enclosed)
- Submit Holiday Homework on the day the school reopens i.e. 1st July 2019.
- Subject Enrichment activity of 5 marks will be evaluated on the basis of the given Holiday Homework.
- For Classes IX to XII students must utilize this period to accomplish their task of revision, project file and practical file along with given assignment and preparation for upcoming tests.

Hope you return rejuvenated and energetic on 1st July 2019 at BLS.

Principal

B.L.S International School (Hathras)
2019-2020
Holiday Home work Class X
Science

PHYSICS- **Do the following questions in the note book.**

1. State the law which relates current and potential difference in a circuit.
2. Which physical quality can be measured from **V-I** graph slope?
3. On what factors resistance of a conductor depend?
4. Define resistivity. On what factors does it depend?
5. Define series combination of resistors & obtain an expression for three resistors combined in series.

CHEMISTRY - Do the following questions in the note book.

1. What happens when the solutions of lead nitrate and potassium iodide have mixed.
(a)What will be the color of the precipitate formed and can you name the precipitate?
(b) Write the balanced chemical equation for this reaction.
(c)Is this also a double displacement reaction?
2. Give reasons:
(a)The chips packets are flushed with nitrogen gas.
(b) Gold and Platinum not corrode easily.
(c)Iron articles are coated with paints
(d) Respiration is considered as exothermic reaction.
(e)Magnesium ribbon should be cleaned before burning it in air.
 3. Give one example of each;
(a) Photochemical reaction.   (c) Displacement reaction
(b) Precipitation reaction.   (d) combination reaction.
 4. Write word equations and then balance it when
(a) Dilute sulphuric acid reacts with zinc granules.
(b) Dilute HCl reacts with magnesium ribbon.
(c) Dilute sulphuric acid reacts with aluminium powder.
(d) Dilute HCl reacts with iron filings.
5.   Write the uses of each:
a) Antaacids   (b) plaster of Paris   (c) Baking Powder   (d)   Gypsum

BIOLOGY - Do the following questions in the note book

Q1. When a leaf is illuminated with light, cell organelle A gets activated into material B present in it absorb this light. The absorbed light is converted into chemical form and finally, it is utilised to form substance C using CO_2 and D.
i) Identify ABCD in this question.
ii) Name the process which is being discussed in this question
Q2. Food do not enter in liver and Pancrea yet important in digestion. Discuss the role of liver and pancreas indigestion.
Q3.a) how the guard cells regulate opening and closing of stomata of stomatal pore? Explain with the   help of diagram.
  b) Also, indicate what happens to the rate of photosynthesis if stomata get blocked due to dust?
Q4. What is emphysema? Discuss how it can be treated?
Q5. What is myogenic and neurogenic heart? What is pacemaker?

Maths

Instruction:

- **Do the Assignment in your R.S Agrawal note book.**
- **Assignment Attached in your notebook.**
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Polynomials

Q1, Using division algorithm, find the quotient and the remainder on dividing f(x) by g(x) , where f(x) =$6x^3$ +$13x^2$ + x - 2 and g(x) =2x+1

Q2. If α , β are the zeros of $2y^2$+7y+5 write the value of α+ β +α β.

Q3. Find the zeros of a quadratic polynomial $5x^2$- 4 -8x and verify the relationship between the zeros and the coefficients of the polynomial.

Q4. If α, β are the zeros of the poly.f(x)=x^2-px+q, find the value of   (a) α^2+β^2 (b)$1/\alpha$ +$1/\beta$

Q5. On dividing x^3+$2x^2$-5x-6 by a polynomial g(x) the quotient and remainder were x+1 and -4x -4 respectively Find the polynomial g(x)

Q6. If (x + a) is a factor of $2x^2$+2ax+5x+10. Find a.

Q7. Find all the zeros of $2x^4$-$9x^3$+$5x^2$+3x-1, if two of its zeros are 2+√3 & 2- √3

Q8. If the polynomial $6x^4$ + $8x^3$ + $17x^2$ + 21x + 7 is divided by another polynomial $3x^2$ + 4x + 1, the remainder comes out to be (ax + b), find a and b.

Q9. Find all other zeroes of the polynomial $p(x) = 2x^3$+ $3x^2$ – 11x – 6, if one of its zero is –3.

Q10. If one zero of the polynomial (a^2 +9)x^2 +13x +6a is reciprocal of the other . Find the value of a.

Introduction to Trigonometry

Q1. If $\sin \theta = \frac{a^2-b^2}{a^2+b^2}$, find the value of other trigonometric ratios.

Q2. Find the value of x :$\frac{\cos x - \sin x}{\cos x + \sin x} = \frac{1-\sqrt{3}}{1+\sqrt{3}}$

Q3. If cotA =$\frac{4}{3}$ check $\frac{(1 - \tan 2A)}{(1 + \tan 2A)} = $ cot2A – sin2A

Q4. Sin (A – B) = ½, cos(A + B) = ½ find A and B

Q5. Evaluate tan5 tan25 tan30 tan65 tan85

Q6. In ABC, if sin (A + B – C) = √3/2 and cos(B + C – A) =1/√2, find A, B and C.

Q7. Prove that $(\sin \theta + \sec \theta)^2 + (\cos \theta + \csc \theta)^2 = (1 + \sec\theta.\csc\theta)^2$

Q8. If $\cos \theta + \sin \theta = \sqrt{2} \cos \theta$ show that $\cos \theta - \sin \theta = \sqrt{2} \sin \theta$

Q9. If $\sin \theta + \sin^2 \theta = 1$ prove that $\cos^2 \theta + \cos^4 \theta = 1$

Q10. If $5x = \sec \theta$ and $\frac{5}{x} = \tan \theta$ find the value of $5(x^2 - \frac{1}{x^2})$

Coordinate Geometry

Q1. Show that the point $(a, a), (-a, -a)$ and $(-\sqrt{3} a, \sqrt{3}a)$ are the vertices of an equilateral triangle. also find its area.

Q2. If the point P (x, y) is equidistant from the points A $(5, 1)$ and B$(1, 5)$ prove that $x = y$.

Q3. If $A(5, -1), B(-3, -2)$, $C(-1, 8)$ are the vertices of a ΔABC. Find the length of median through A and the coordinate of the centroid.

Q4. If the coordinates of the mid points of the sides of a triangle are$(3, 4), (4, 6)$ and $(5, 7)$ find its vertices and also find the centroid.

Q5. The line segment joining the points $(2, 1)$ and $(5, -8)$ is trisected at the points P and Q. if point P lies on the line $2x - y + k = 0$ find the value of k.

Q6. Prove that the points $(a,\ b + c), (b,\ c + a)$ and $(c,\ a + b)$ are collinear.

Q7. If P (x, y) is any point on the line joining the points $A\ (a, 0)$ and $B\ (0, b)$ then show that $\frac{x}{a} + \frac{y}{b} = 1$.

Q8. If the points $(p, q), (m, n)$ and $(p - m, q - n)$ are collinear show that $pn = qm$.

Q9. Find the area of triangle whose vertices are: -

i. $A(at_1^2, 2at_1)B(at_2^2, 2at_2) and C(at_3^2, 2at_3)$.

ii. $A(a, c + a)B(a, c) and C (-a, c - a)$

Q10. If three points $(x_1, y_1), (x_2, y_2), (x_3, y_3)$ lie on the same line prove that $\frac{y_2-y_3}{x_2 x_3} + \frac{y_3-y_1}{x_3 x_1} + \frac{y_1-y_2}{x_1 x_2} = 0$.

Social Science

Prepare the project file on any of the following topics. Also attach summary report highlighting survey, G.D. and innovative ideas.

- ❖ Natural disaster
- ❖ Consumer awareness
- ❖ Social Issue
- ❖ Sustainable development

I.T

All the mentioned projects to be done on computer and to be printed on A4 sheets.

1. Create a worksheet in MS Excel displaying the "Pollution Level in Major Indian cities".
2. Create a presentation on different types of pollution by collecting information from different sources: book, Wikipedia, Google etc. insert appropriate images and important points by applying bullets.
3. Type a document in MS Word on the topic of "E-waste Disposal".
   a. Top and Bottom Margins: 1.5"
   b. Left and Right Margins: 1"
   c. Font size: 12, face: Cambria and style: regular.
   d. Line spacing 1.15
   e. Insert relevant shapes or relevant images.

English

Attempt all the questions given below in notebook.

Q.1 In our society we do not give to our women the respect and status that they deserve. women are stared at, stalked and even molested .We need to change the male's mindset about women. Write a letter in 120-150 words to the editor of a national newspaper giving your views on the problem. You are Amit/Shikha,A 114 mall road, Delhi.

Q.2 Write an article on 'Negative Impact of reality shows on children in about 200 words.

Q.3 If you are given an opportunity to introduce some changes in B.L.S International School for a day. What Changes would you like to introduce?

Q.4 Write a short story in about 150-200 words by continuing the following story; 'I jumped out of the bad at midnight _____.'

Hindi

निर्देशः– निम्नकार्य अपनी कार्य पुस्तिका में कीजिए।

प्र.1 "वोट डालना हमारा एक अतिमहत्त्वपूर्ण कर्त्तव्य है।"इस विषय पर अध्यापक तथा छात्र के मध्य होने वाले संवाद को लिखिए।

प्र.2 मासिका पत्रिका हेतु विज्ञापन तैयार कीजिए।

प्र.3 किसी एक विषय पर अनुच्छेद लिखिए– वन एवंवन्य संपदा **अथवा** लोकतंत्र और चुनाव

प्र.4 पाठ–3 तताँरा–वामीरो कथा पढ़िए व उसका प्रतिपाद्य लिखिए।

प्र.5 मीराबाई द्वारा रचितपदों की व्याख्या कीजिए।