Al Barkaat Public School(+2)
(Affiliated to CBSE, New Delhi)

Summer Holiday Home Work (2018-19)
Class-IX

ENGLISH	HINDI
• Draw the character sketch of Mithi, heroine of chasing the rainbow. Would you like to follow her? If yes, describe your plan. • Write the central idea of the poem "Road Not Taken".	''पाठ 'दुख का अधिकार' कहानी धनी लोगों की अमानवीयता और गरीबों की मजबूरी को पूरी गहराई से उजागर करती है।'' इस उक्ति पर अपने विचार व्यक्त कीजिए। (शब्द सीमा—500)

URDU
(الف)   درج عنوانات پر کم از کم دو دو صفحہ کا مضمون لکھئے۔ (۱) ہمارے قومی تہوار (۲) یوم اساتذہ (ب)   میرؔ، غالبؔ، اقبالؔ اور فیضؔ کے پانچ پانچ اشعار خوشخط لکھئے۔

SCIENCE

Physics
1. A motorboat starting from rest on a lake accelerates in a straight line with a constant rate of 3 ms^{-2} for 8s. How far boat travel during this time.
2. An artificial satellite moving in circular orbit of radius 42250 km. Calculate its speed if it takes 24 hours to revolve around the earth.
3. A train is travelling at a speed of 90 km/h. Brakes are applied so as to produce a uniform acceleration of -0.5 ms^{-2}. How far does the train will go before it is brought to rest?
4. A bus decreases its speed from 72 km/h to 54 km/h in 10s. Calculate the acceleration of bus.
5. Draw a chart of all the physical quantities of chapter-1 of physics with their formulae, symbols and S.I. unit.

Practical No. 1 and 2

Chemistry
1. Would the rate of evaporation be more in a beaker or in saucer why?
2. Do clothes dry faster on a hot dry day or in a humid day why?
3. Which of the following pairs will not exhibit diffusion.
   (a) hydrogen, oxygen   (b) oxygen, water
   (c) salt, sand   (d) sugar, water
4. The smell of incense stick spreads through out due to:
   (a) osmosis   (b) occlusion   (c) diffusion   (d) absorption
5. Can a solid directly be converted into a gas? Give an example.

Practical
1. To carryout the following reactions and classify them as physical and chemical change:
   i) Iron and copper sulphate in water.
   ii) Burning of magnesium in air.
   iii) Zinc in dilute HCL.
   iv) Sodium sulfate and barium sulphate in the form of their solution water.
2. To determine the melting point and boiling point of water.

Biology
1. Name the cell organelle which is common called suicide bag?
2. Name the organelle which is associated with protein synthesis?
3. Cell wall is composed of which material in plants?
4. Who coined the term cell and in which year?
5. Name the membrane which covers the vacuole in plant cell?
6. Who proposed the fluid mosaic model?

7. Which cell organelle are termed as "The power house of the cell"?

8. Name the organism which do not posses a well defined nucleus L membrane bound cell organelle?
9. Who gave cell theory?
10. Name the longest human body cell?
11. Which organelled is associated with synthesis of lipids and steroids?
12. Give two example of unicellular organisms?
13. Name 3 basic component of typical enkaryotic cell?
14. Name two types of Ribosomes?
15. The idea "Omnis Cellula-e-cellula' was given by?
16. Beside nucleus which other organelle has its own DNA?
17. Chromosomes is made up of which two components?
18. Who discovered nucleus in cell?
19. Absorption of water by plant is an example of _____?
20. Primary function of Leucoplast is _____?

SOCIAL SCIENCE

Geography
1. Locate and label the following on an outline map of India:
   a) The Aravali
   b) The Vindhya
   c) The Satpura
   d) The Western and Eastern Ghats
   e) The Karakoram, the Zarkar and Shivalik
2. Why 82°30' E has been selected as the standard Meridian of India?
3. Why is the difference between the duration of day and night hardly felt at Kanyakumari but not so in Kashmir?

Economics
1. Talk to some old residents in your region and write a short report on the changes in irrigation and changes in production methods during last 30 years.
2. On what terms did Sarita get a loan from Tejpal Singh? Would Sarita's condition be different, if she could get a loan from the bank at a low rate of interest?
3. Explain any four efforts which can be made to increase non farming production activities in the village.
4. Explain any four efforts which can be made to increase non farming production in the village.
5. Why are the wages for form labourers in Palampur less than minimum wages?

History
Answer the following questions:
1. Very short answer type questions:
   a) Who wrote the book 'The Treatises of Government'?
   b) Which period of 18th C is referred as the Reign of Terror in the History of Frame?
   c) Who were Sansculattes?
   d) What is 'Tithe'?
   e) Who was Napolean Bonaparte?
2. Short answer type questions:
   a) Why was the subsistence crises caused in France?
   b) How was slavery abolished in France?
   c) What role did women play during the French revolutionary years?

3. Long answer type questions:
   a) Explain any five economic causes of the French Revlution.
   b) What role did the philosophers play in bringing about the French Revolution? Explain any five points.

Civics

Answer the following questions:
1. Very short answer type questions:
   a) Who passed the Legal Framework Order?
   b) What is democracy?
   c) Why are China and Mexico not regarded as democracies despite holding elections?
   d) What is Referendum?
   e) In a democracy the final decision making power must rest with whom?
2. Long answer type questions:
   a) Enumerate the arguments against democracy.
   b) What steps were taken by General Pervez Musharraf in Pakistan to empower/enhance himself?

MATHEMATICS

Assignment should be done in the Assignment register and should be submitted to the subject teachers on the day of reopening.

1. Represent $\sqrt{5}$ on a number line

2. Represent $\sqrt{9.3}$ on the number line.

3. Rationalize the denominator of each of the following:
   a. $\dfrac{1}{\sqrt{3}+\sqrt{2}}$　　　b. $\dfrac{6}{3\sqrt{2}-2\sqrt{3}}$　　　c. $\dfrac{1}{\sqrt{3}+\sqrt{2}-\sqrt{5}}$

4. If $\dfrac{\sqrt{7}-1}{\sqrt{7}+1}-\dfrac{\sqrt{7}+1}{\sqrt{7}-1}=a+b\sqrt{7}$, find a and b where a and b are rational.

5. Simplify:

   a. $(1^3+2^3+3^3)^{\frac{1}{2}}$　　　b. $\dfrac{9^{\frac{1}{3}}\times 27^{-\frac{1}{2}}}{3^{\frac{1}{6}}\times 3^{-\frac{2}{3}}}$

6. Expand $\left(\dfrac{a}{4}-\dfrac{b}{2}+1\right)^2$

7. Factorize $2x^2+\dfrac{y^2}{49}+3z^2+2\sqrt{6}zx-\dfrac{2\sqrt{3}}{7}yz-\dfrac{2\sqrt{2}}{7}xy$

8. If $x+y=8$ and $xy=15$, find x^2+y^2.

9. Show that $2x+1$ is a factor of $2x^3-11x^2-4x+1$.

10. Factorize the polynomial: $8x^3-(2x-y)^3$

11. Factorize　　　a). $(a+b)^3-(a-b)^3$　　　b. x^8-y^8

Use remainder theorem to find the remainder when p(x) is divided by q(x) in each of the following.

12. $p(x)=4x^3-12x^2+11x-5, q(x)=x-\dfrac{1}{2}$

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13. Find the value of a so that $x + 6$ is a factor of $x^3 + 3x^2 + 4x + a$.

14. Show that a+4, a-3 and a-7 are factors of $a^3 - 6a^2 - 19a + 84$.

15. Using long division method, show that the polynomial p(x)= x³+1 is divisible by q(x)=x+1. Verify your result using factor theorem.

16. If f(x)= x²-5x+7, evaluate f(2)-f(-1) +f(1/3).

17. Find the product of $(x - \dfrac{1}{x})(x + \dfrac{1}{x})(x^2 + \dfrac{1}{x^2})$

18. Evaluate a) 99²   b) 105 × 95

19. If a+b+c= 9 and ab+bc+ca = 26, find the value of a²+b²+c².

20. The polynomial $p(x) = x^4 - 2x^3 + 3x^2 - ax + 3a - 7$ when divided by $x + 1$ leaves the remainder 19. Find the value of a. also find the remainder when $p(x)$ is divided by x+2.

Lab Manual:
Activity 1: Irrational Number

Represent irrational number on number line ($\sqrt{2} and \sqrt{3}$ on number line)

Activity 2: Square Root Spiral

To make square root spiral

Note: Learn table 2 to 20.

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