Al Barkaat Public School(+2)

(Affiliated to CBSE, New Delhi)

Summer Holiday Home Work (2018-19)

Class-X

ENGLISH	HINDI
• Learn and write poetic devices in the note book. • NOT OUT (School Cinema) Write a short script based on struggling period of your life and how did you motivate yourself to face it. • The Bookseller from the mountains. (School Cinema) Do students have to be aware of their aptitude and skills to choose? Comment taking the examples of School Cinema.	कबीर की साखियों का भावार्थ स्पष्ट करते हुए आज के युग में उनकी प्रासंगिकता बताइए।

URDU

(الف) درج عنوانات پر کم از کم دو دو صفحہ کا مضمون لکھئے۔(۱)پسندیدہ شخصیت(۲) مذہبی تہوار

(ب) مندرجہ ذیل محاوروں کو جملوں میں استعمال کیجئے۔

(۱)اپنے پاؤں پر کھڑے ہونا،(۲) اپنے منہ میاں مٹھو بننا،(۳) بال کی کھال نکالنا،(۴) باغ باغ ہونا،(۵) بال بال بچنا،(۶) جان پر کھیلنا،(۷ (جان میں جان آنا،(۸) دانت کھٹے کرنا،(۹) سبز باغ دکھانا،(۱۰) مٹھی گرم کرنا

SCIENCE

Physics

1. An electric bulbs rated at 200V-100W. What is its resistance? Five such bulbs burn for four hours. What is the electrical energy?
2. When two resistors of resistance R_1 and R_2 are connected in parallel, the net resistance is 3Ω. When connected in series, its value is 10Ω. Calculate the values of R_1 and R_2.
3. Two Copper wires A and B of length 30m and 10m have radii 2cm and 1cm, respectively. Compare the resistances of the two wires. Which will have less resistance?
4. Explain the following:
   a) Why is tungsten used for filament of electric bulb?
   b) Why is the conductors of electric heating devices such as bread toaster and electric irons, made of an alloy rather than a pure metal?
   c) Why are copper and aluminum wires usually employed for electricity transmission?
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. Define oxidation and reduction with suitable examples.
2. Zinc liberates hydrogen gas when reacted with dil HCl whereas copper does not explain why?
3. What happens when
   a) Zinc metal is added to copper sulphate solution.
   b) Aluminium metal is added to dil HCl.
   c) Ag metal is added to copper sulphate solution.
4. What happens when a drop of barium chloride solution is added to sodium sulphate? Write.
   a) Balanced chemical equation
   b) What other name can be given to this precipitation reaction.
5. Why do iron corrode not aluminium what is the phenomena called and write the ways to protect iron article?

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6. Oil and fat containing food items are flushed with nitrogen why?
7. A silver article generally turns black when kept in open air for few days.
   a) Why do the silver articles turns black when kept in open air for few days.
   b) Name the phenomena involved and the black substance formed give its chemical formula.

Practical No. 1 and 2

Biology

1. Write Answer for following questions:
   a) Steps of Photosynthesis.
   b) Exchange of gases between Alveoli and Blood.
2. Draw Diagram of:
   a) Human Digestive System
   b) Human Respiratory System
3. Match the columns:

Column I		Column II
1. Autotrophs	(a)	goat, cow
2. Heterotrophs	(b)	digestive gland
3. Sapro means	(c)	lion, tiger
4. Photosynthetic pigments	(d)	man, dog
5. Herbivores	(e)	unicellular
6. Carnivores	(f)	chlorophyll, caratoenoids
7. Omnivores	(g)	rotten
8. Amoeba	(h)	green plants
9. End product of photosynthesis	(i)	all animals, some bacteria
10. Liver	(j)	glucose, water and O_2

4. Fill in the blanks:
   a) Respiration is a _____ process.
   b) Krebs cycle takes place in _____.
   c) Full form of ATP is _____.
   d) _____ is the voice box.
   e) The grasshopper has a _____ system for breathing.
   f) Energy produced during respiration is in the form of _____.
   g) Unicellular organisms exchange gases by _____.
   h) Food is directed towards the food pipe by the _____.
   i) Structures that are present on the hard corky surfaces of stem and trunks for exchange of gases a _____.
   j) Deoxygenated blood has more _____ and less _____.
   k) Respiration is of two types _____ and _____.
5. Match the columns:

Column I		Column II
1. Larynx	(a)	intake of air
2. Fish	(b)	discharge of air from lungs
3. Trachea	(c)	catabolic process
4. Inhalation	(d)	lungs
5. Expiration	(e)	gill
6. Respiration	(f)	wind pipe
7. Pneumonia	(g)	in absence of oxygen
8. Anaerobic respiration	(h)	voice box

6. True and False Statements:
   a) Respiration and photosynthesis are antagonistic and complementary to each other.
   b) Food is a kind of fuel which provides energy to all living organisms.

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c) The simplest food is starch and the complex food is glucose.
d) The mechanism by which organisms obtain oxygen from the environment and release carbon dioxide is respiration.
e) The rate of respiration in plants is much slower than that of animals.
f) Stomata are present as the tiny pores on the lower surface of leaves.
g) Amoeba and a few protozoans like Euglena, Paramecium respire through the body surface by the process of diffusion.
h) Energy released in respiration is partly in the form of heat and partly stored in energy-rich bonds called ATP.
i) Oxygen is needed in anaerobic respiration.

SOCIAL SCIENCE

Geography

1. Map skills:

Chapter 1: Soil map
Chapter 3: Rivers and Dams on Map
Chapter 4: Agriculture – on map
i) Largest producing state of Rice, Wheat, Sugarcane, Rubber, Cotton, Jute.
ii) Write and learn the geographical conditions for the growth of the following crops:
Rice, Wheat, Sugarcane, Rubber, Cotton and Jute.

All maps to be pasted in a scrap book.

2. **Learning work**: Learn Chapter Resources and Development.

Economics

1. Explain with the help of five examples how development could mean different things to different people.
2. Why are public facilities needed for the development of the country? Mention any two of them.
3. Explain:
   a) Conflicting goals
   b) Common goals
   c) Special goals
4. Write the main functions of World Bank.
5. Write the per capita income of top ten.
   a) Developed countries
   b) Developing countries
   c) Under developed countries
6. "We are not inherited the world from our forefathers. We have borrowed it from our children". Explain.

History

Answer the following questions:

1. Very short answer type questions:
   a) Who was Henry Mayhew?
   b) Name the presidency cities of colonial India.
   c) Name the acts through which children were kept out of industrial work in London.
   d) Which was first Indian city to get Smoke Nuisance legislation?
   e) When did Bombay become the capital of the Bombay Presidency?
2. Short answer type questions:
   a) Who designed the garden city of New Earswick? Mention its two features.
   b) What were Chawls?

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c) How did the development or expansion of Bombay differ from London?

3. Long answer type questions:
   a) "Bombay appears to many as a city of Dreams." – Explain by giving examples.
   b) What forms of entertainment came up in nineteenth century England to provide leisure activities for the people?

Civics

Answer the following questions:

1. Very short answer type questions:
   a) Which two languages are generally spoken in Belgium?
   b) What is a federal government?
   c) Which language is spoken by majority of Sri Lanka?
   d) Name any two examples of 'Coming together federation'.
   e) Name an Indian State which enjoys a special status.
2. Long answer type questions:
   a) "Federations are contrasted with unitary governments". Explain by giving examples from Sri Lanka and Belgium.
   b) What are the different forms of power sharing in modern democracies?

MATHEMATICS

1. Use euclids division algorithm to find HCF of 867 and 255
2. Show that any positive odd integer is of the form 6q + 1, 6q + 3 or 6q + 5, where q is some integer.
3. Find the LCM and HCF of the following integers and verify that LCM × HCF = product of the two numbers 26 and 91.
4. Prove that $3 + 2\sqrt{5}$ is an irrational.
5. Without performing long division, state whether the following rational numbers will have a terminating repeating decimal expansion or a non- terminating repeating decimal expansion $\frac{64}{455}$.
6. Obtain all other zeroes of $3x^4 + 6x^3 - 2x^2 - 10x - 5$, if two of its zeroes are $\sqrt{\frac{5}{3}}$ and $-\sqrt{\frac{5}{3}}$.
7. Draw the graph of the equations $x - y + 1 = 0$ and $3x + 2y - 12 = 0$. Determine the coordinates of the vertices of the triangle formed by these lines and the x-axis, and shade triangular region.
8. Solve the following pair of linear equations by the elimination method and substitution method: $3x+4y=10$ and $2x - 2y = 2$
9. Meena went to a bank to withdraw Rs 2000. She asked the cashier to give her Rs 50 and Rs 100 notes only. Meena got 25 notes in all. Find how many notes of Rs 50 and Rs 100 she received.
10. For which value of a and b does the following pair of linear equations have an infinite number of solution?
    $2x + 3y = 7$; $(a-b)x + (a+b) = 3a + b - 2$.
11. A part of monthly hostel charges is fixed and the remaining depends on the number of days one has taken food in the mess. When a student A takes food for 20 days she has to pay Rs 1000 as hostel charges where as student B, who takes food for 26 days, pays Rs 1180 as hostel charges. Find the fixed charges and the cost of food per day.
12. Formulate the following problem as pair of equations, and hence find their solutions:
    Rita can row downstream 20 km in 2 hours, and upstream 4 km in 2 hours. Find her speed of rowing in still water and the speed of the current.

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13. The altitude of a right triangle is 7 cm less than its base. If the hypotenuse is 13 cm, find the other two sides.
14. Find the roots of the following quadratic equations by applying the quadratic formula: $2x^2 + x - 4 = 0$
15. If α & β are zeroes of polynomial $6x^2 + x - 1$, the find the value of
    (i) $\alpha^3\beta + \beta^3\alpha$ (ii) $\frac{\alpha}{\beta} + \frac{\beta}{\alpha} + 2\left(\frac{1}{\beta} + \frac{1}{\alpha}\right) + 3\alpha\beta$
16. If the zeroes of the polynomial $f(x) = x^3 - 3x^2 - 6x + 8$ are of the form a – b , a , a + b, find all zeroes.
17. What must be added to $f(x) = x^4 + 2x^3 - 2x^2 + x - 1$,so that the resulting polynomial is divisible by $g(x) = x^2 + 2x - 3$?
18. If the polynomial $f(x) = ax^3 + bx - c$ is divisible by the polynomial $g(x) = x^2 + bx + c$, then find the value of ab.
19. If α & β arethe zeroes of the polynomial $f(y) = y^2 - 8y + a$ and $\alpha^2 + \beta^2 = 40$, find value of a.
20. Show that one and only one out of n , n + 4 , n + 8, n + 12 and n + 16 is divisible by 5, where n is any positive integer.
21. Shoe that $\sqrt{p} + \sqrt{q}$ is an irrational number, where p, q are primes.
22. Using euclids division algorithm, find whether the pair of numbers 847, 2160 are co-prime or not.
23. If n is an odd positive integer, show that (n^2-1) divisible by 8.
24. Two positive integers p and q can be expressed as $p = ab^2$ and $q = a^2b$, a and b are prime numbers. What is the LCM of p and q?
25. Find the largest positive integer that will divide 398, 436 and 542 leaving remainders 7, 11 and 15 respectively.
26. Solve the following pair of equations for x and y. $\frac{a^2}{x} - \frac{b^2}{y} = 0$; $\frac{a^2}{x} + \frac{b^2}{y} = a + b$, $x \neq 0$, $y \neq 0$
27. Determine graphically , the vertices of the triangle formed by these lines y=x , 3y = x, x + y = 8. Also find area of triangle so formed.
28. A boat covers 25 km upstream and 44 km downstream in 9 hours. Also, it covers 15 km upstream and 22 km downstream in 5 hours. Find the speed of the boat in still water and that of the stream.
29. Solve : ax + bx = a – b and bx – ay = a + b
30. For which value of k will the following pair of linear equations have no solution?
    3x + y = 1 ; (2k -1)x +(k -1)y = 2k + 1
31. Do any two activities based on chapter taught in mathematics lab manual

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