PRATAP
INTERNATIONAL SCHOOL
POCKET -2, SEC- 24, ROHINI, NEW DELHI

P.I.S

HOLIDAY HOMEWORK
CLASS · IX (2019-20)

Life is all about climbing mountains and fording streams... Arouse in yourself the desire to reach the pinnacle of perfection. Make the most of yourself by fanning the tiny, inner sparks of possibilities into flames of opportunity. Act now, value every moment for your dreams can only become a reality when action is taken towards its achievement.

ENGLISH

LITERATURE

Answer the following questions in about 80 words each:

1. Grandmother said, "I will work harder than anybody, but I will do it. For learning there is no age bar." What value has been focussed upon here in these lines?
2. What had made Triveni such a popular writer?
3. The poem 'The Brook' is full of images that come alive through skillful use of words. List out any two images that appeal to you the most.
4. Which incident changed Hooper's life and how?

WRITING SKILL – STORY WRITING

5. Write a story in about 150-200 words to illustrate 'Do good, get good.'

6. The author 'J' jumps into the river and becomes a hero. Describe the incident highlighting the traits of J's character.
7. What do you think about Harris as a cook? Write your opinion with reference to the incident of making scrambled eggs.
8. Under what circumstances was George told to play a comic song? What was the effect of the comic song 'Two lovely Black Eyes' on others?

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MATHEMATICS

1. Write the simplest rationalization factor of

   a) $\sqrt[5]{a^2 b^3 c^4}$ b) $2\sqrt{5} - \sqrt{3}$

2. If $\dfrac{1}{2}$ is a zero of the polynomial $p(x) = 2x^4 - ax^3 + 4x^2 + 2x + 1$ find the value of a.

3. If $x + \dfrac{1}{x} = 3$, find the value of $x^2 + \dfrac{1}{x^2}$.

4. Simplify $\left[5\left(8^{1/3} + 27^{1/3} \right)^3 \right]^{1/4}$

5. Find the value of a and b if $\dfrac{5 + \sqrt{3}}{7 - 4\sqrt{3}} = a + b\sqrt{3}$

6. Find the area of an equilateral triangle whose perimeter is 18cm.

7. Write the coefficient of x^2 in $(2x^2 - 5)(4 + 3x^2)$.

8. Factorize : $2x^3 - x^2 - 13x - 6$

9. . If $x + y + z = 9$ and $x^2 + y^2 + z^2 = 35$, find the value of $x^3 + y^3 + z^3 - 3xyz$

10. Find the value of x if $\left(\dfrac{2}{3} \right)^x \left(\dfrac{3}{2} \right)^{2x} = \dfrac{81}{16}$

11. The lengths of the sides of a triangle are in the ratio 5:4:3 and its perimeter is 96m. Find the area of the triangle.

12. Simplify : $\dfrac{(243)^{3/5} \times (25)^{3/2}}{(625)^{1/2} \times (8)^{4/3} \times (16)^{5/4}}$

13. Using identity find the product of $\left(x - \dfrac{1}{x}\right)\left(x + \dfrac{1}{x}\right)\left(x^2 + \dfrac{1}{x^2}\right)\left(x^4 + \dfrac{1}{x^4}\right)$

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SCIENCE

PHYSICS

(i) Calculate distance & displacement in the following cases-
   a. An object moving along the boundary of circular track of diameter 10m & completes 4.5 rounds.
   b. A boy started jogging from his home & moves 500m towards West then 400m towards South, then 600m towards East & finally 400m towards North.

(ii) What conclusion would you draw from the following graphs?
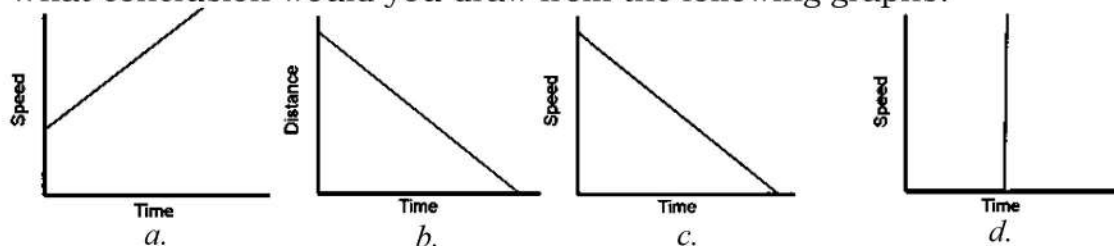
(iii) Draw the graph for following situations-
   a. Object at rest (distance - time)
   b. Object at zero acceleration (distance - time, velocity - time)
   c. Object at uniform retardation (velocity - time)
   d. Object first accelerated uniformly, then constant speed & finally retarded non-uniformly (velocity - time)

(iv) Solve -
   a. A bus increases its speed from 36km/h to 90km/h in 10 seconds and stops in 5 seconds after applying brakes. Calculate acceleration in both cases.
   b. A car travels 200km at a speed of 60km/h & returns with a speed of 40km/h. Calculate average speed for the entire journey.

(v) The velocity-time graph of a moving object is as follows –

   Find -
   a. Velocity of object at point C.
   b. Acceleration acting on object between A to B, B to C & C to D.
   c. Total distance covered in 8 hours.
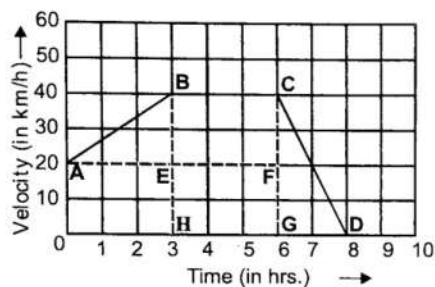
CHEMISTRY

(i) A substance 'X' is highly compressible and can be easily liquified. It can also take up the shape of any container. Enlist any four properties of this state of matter.

(ii) A gas jar containing air is inverted over another containing NO_2 gas which is brown in colour and heavier than air. After sometime brown colour is seen in the inverted gas jar too. Identify and define the phenomenon associated with this observation.

(iii) A spoonful of sugar is added to a beaker containing 500ml of water and stirred for a while. State any two observations that you will make.

(iv) Melting point of three substances A, B, C are 52^0C, 175^0C and 80^0C. Arrange them in the decreasing order of the inter-particle force of attraction in each of them. Give a reason for your answer.

(v) Convert the following:
   a. 35^0C to Kelvin
   b. 438K to ^0C

BIOLOGY

(i) How is cell wall different from cell membrane? (3 points)

(ii) Give one word
   a. Cell organelle present in prokaryotic cell
   b. Plant tissue which consists of undifferentiated cells.
   c. Cell organelle in which digestive enzymes of lysosomes are made.

(iii) Draw a prokaryotic cell and label it.
   a. Name its genetic region
   b. How many chromosomes are present in it?

(iv) Give one function each of the following:
   a. Vacuoles
   b. SER
   c. Golgi body
   d. Leucoplast

(v) How will a plant cell behave in
   a. Hypotonic solution
   b. Hypertonic solution

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SOCIAL SCIENCE

GEOGRAPHY

(i) How has India developed relationship with the world through the land routes?

(ii) What are India's unique locational features?

(iii) What do you mean by the "Theory of Plate Tectonics"?

(iv) What are the three types of plate movements on the earth? Explain with the help of diagrams.

(v) How were the northern plains formed?

CIVICS

(i) Give simple definition of democracy.

(ii) What were the instances of denial of equal right to vote?

(iii) Write in brief about the political situation of Zimbabwe.

(iv) Describe the features of democracy as a form of government.

(v) What are the arguments for democracy as a form of government?

(vi) What are the arguments against democracy?

ECONOMICS

(i) Categorize the following into fixed & working capital:
   a. Diesel
   b. Tractor
   c. Units of electricity
   d. Cash in hand

(ii) Explain any 2 positive and 2 negative effects of Green Revolution.

(iii) A farmer sold 100kg wheat grains at ₹10/kg to a miller. Miller converted 100kgs of wheat grains into 100kg flour and sold it at ₹12/kg. Find out the value of production by the miller?

(iv) Describe the infrastructure development of village Palampur.

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हिन्दी

1. चित्र-लेखन

(i) कम्प्यूटर की उपयोगिता   **(ii)** बच्चों में बढ़ती धूम्रपान की समस्या

(विषय से संबंधित चित्र चिपकाते हुए 40-50 शब्दों में चित्र-वर्णन कीजिए।)

2. कक्षा दस में बोर्ड परीक्षा की वापसी को लेकर दो अभिभावकों की बातचीत को संवाद रूप में लिखिए। (10-15 वाक्य)

3. "हमारे बुजुर्ग हमारी धरोहर" विषय पर 80-120 शब्दों में अनुच्छेद लिखिए।

नोट : समस्त कार्य व्याकरण कॉपी में करें।

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संस्कृत

1. पाठ – 1,2 से 20 प्रश्नों का निर्माण कीजिए।

2. पाँच चित्र लगाकर पाँच-पाँच वाक्यों का निर्माण कीजिए।

नोट : यह कार्य संस्कृत उत्तर पुस्तिका में स्वच्छ लेख में कीजिए।