KERALA PUBLIC SCHOOLS
ACADEMIC YEAR 2021-22

CLASS : IX **HOME ASSIGNMENT**

DATE : 15.01.22 to 08.02.22

SUBJECT	ASSIGNMENT
MATHS	Q1. A box contains 50 bolts and 150 nuts. On checking the box, it was found that half of the bolts and half of the nuts are rusted. If one item is chosen at random, find the probability that it is rusted. Q2. The probability of guessing the correct answer to a certain question is x/ 2.If probability of not guessing the correct answer is 2/3, then find x. Q3.There is a group of 75 people who are patriotic, 35 people believe in violence. What is the probability of people who believe in non-violence? Q4. In a cricket match, a batsman hits a boundary 6 times out of 30 balls plays. Find the probability that on a ball played, (i) He does not hit a boundary. (ii)He hits boundary me Q5. 100 plants were shown in six different colonies A, B, C, D, E, and E . After 31 days, the number of plants survived as follows:

Colony	*A*	*B*	*C*	*D*	*E*	*F*
No. of Plants survived	*80*	*90*	*84*	*76*	*82*	*92*

What is the probability of:

(i) More than 80 plants survived in a colony ?

(ii) less than 82 plants survived in a colony ?

(iii) which value are depicted from above data?

Q6. The curved surface area of a cylinder is 154 cm^2. The total surface area of the cylinder is three times its curved surface area. Find the volume of the cylinder.

Q7. The diameter of moon is approximately ¼ th of the diameter of earth. What fraction of volume earth is the volume of moon ?

Q8. The diameter of a roller is 42 cm and its length is 120 cm. It takes 500 complete revolutions to move once to land a playground. Find the area of the playground in m^2.

Q9.Rinku has built a cuboidal water tank in his house. The top of the water tank is covered with an iron lid. He wants to cover the inner surface of the tank including the base with tiles of size 10 cm by 8 cm. If the dimensions of the water tank are 180 cm x 120 cm x 60 cm and cost of tiles is ₹ 480 per dozen, then find the total amount required for tiles.

Q10. A wall of length 10 m is to be built across an open ground. The height of the wall is 5 m and thickness of the wall is 42 cm. If this wall is to be built with bricks of dimensions 42 cm x

12 cm x 10 cm, then how many bricks would be required?

Q11. The curved surface area of a cylinder I 176 cm^2 and its area of the base is 38.5 cm^2. Find the volume of the cylinder.

Q12. If the volume of a sphere is numerically equal to its surface area, then find the diameter of the sphere.

Q13. A cone is 8.4 cm high and the radius of its base is 2.1 cm. It is melted and recast into a sphere. Find the radius of the sphere.

Q14. To construct a triangle, given its perimeter and its two base angles, e.g., construct triangle with perimeter 10 cm and base angles 60° and 45°.

Q15. Construct Δ XYZ, if its perimeter is 14 cm, one side of length 5 cm and <X= 45°.

Q16.Construct a Δ ABC with BC = 8 cm, <B= 45° and AB – AC = 3.1 cm.

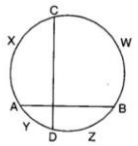
Q17. Three students Priyanka, Sania and David are protesting against killing innocent animals for commercial purposes in a circular park of radius 20 m. They are standing at equal distances on its boundary by holding banners in their hands.

(i) Find the distance between each of them.

(II) which mathematical concept is used in it?

(iii) How does an act like this reflects their attitude towards society ?

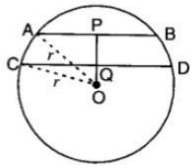
Q18. If two chords AB and CD of a circle AYDZBWCX intersect at right angles (see fig.),



prove that arc CXA + arc DZB = arc AYD+ arc BWC semicircle.

Q19. In the given figure, O is the centre of a circle of radius r cm, OP and OQ are perpendiculars to AB and CD respectively and PQ = 1 cm. If AB II CD, AB= 6cm and CD = 8cm, determiner r.

Q20. Prove that the angle subtended by an arc at the centre is double the angle subtended by it

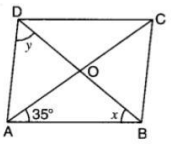


at any point on the remaining part of the circle.

Q21. Show that the quadrilateral formed by angle bisectors of a cyclic quadrilateral, is also cyclic.

Q22. ABCD is a cyclic quadrilateral in which AB and CD when produced meet in E and EA = ED. Prove that: (i) AD\\BC. (ii) EB = EC

Q23.Prove that a diagonal of a parallelogram divide it into two congruent triangles.

	Q24. In the figure, ABCD is a rhombus, whose diagonals meet at O. Find the values of x and y.  Q25. In a parallelogram, show that the angle bisectors of two adjacent angles intersect at right angles. Q26. The line segment joining the mid-points of any two sides of a triangle is parallel to the third side and equal to half of it. Q27. Factorize the following expressions. (i) $5x^2 - 20xy$ (ii) $5a\,(b+c) - 7b\,(b+c)$ (iii) $x(x-y)^2 + 3x^2y\,(x-y)$ (iv) $6ab - b^2 + 12ac - 2bc$ (v) $x^2 + \frac{1}{x^2} + 2 - 2x - \frac{2}{x}$ (i) $x^2 + 9x + 18$ (ii) $x^2 - 4x - 21$ (iii) $x^2 - 9x + 18$ (iv) $x^2 - 19x + 78$ Q28. Find the zeros of the polynomials given below: (i) $p(x) = x - 5$ (ii) $q(x) = x + 4$ (iii) $h(x) = 6x - 1$ (iv) $p(x) = ax + b$ (v) $r(x) = x^2 + 3x$ (vi) $l(x) = x^2 + 2x + 1$ Q29. Calculate $(997)^2$ using algebraic identities. Q30. (i) Give an example of a binomial of degree 27. (ii) Give an example of a monomial of degree 16. (iii) an example of trinomial of degree 3.
SCIENCE	PHYSICS 1. What do you mean by work? What is S.I. unit of work? 2. Define the term energy? What is its S.I unit? 3. A 1000 kg truck moving with a velocity 60 km/h. find the power of the break if it works to stop it in a minute of time? 4. An electric heater is rated 1500 W. How much energy does it use in 10 minutes? 5. What is the law of conservation of energy? CHEMISTRY 1. What are nucleons? 2. What is atomic mass number and atomic number? 3. What are the demerits of Rutherford's atomic model? 4. Draw the structure of atom having atomic number – 23 and atomic number – 11. 5. According to Bohr's atomic model how the electrons will be distributed if Z = 20.

	BIOLOGY 1. Write two diseases caused by (i) bacteria (ii) virus (iii) protozoa 2. What is immunization? 3. What is the difference between acute and chronic disease. Give two examples. 4. What are the different modes of transmission of diseases? 5. What do you understand by health?
HINDI	पुनरावृति साहित्य- प्रश्न1.दादी ने चोर का जीवन कैसे बदल दिया ?मेरे संग की औरतें पाठ के आधार पर लिखिए | प्रश्न2.मेरे संग की औरतें पाठ में लेखिका पाठ में लेखिका की परदादी ने ऐसी कौन-सी बात कह दी थी ,जिसे सुनकर सभी हैरान हो गए | प्रश्न3.गोपाल प्रसाद विवाह को क्या मानते थे ? प्रश्न4. रीढ़ की हड्डी 'एकांकी का प्रमुख पात्र कौन है ? प्रश्न5.माटीवाली अपने पति को रोटियों के साथ कौन-सब्जी खिलाना चाहती थी? प्रश्न6.माटीवाली पाठ के लेखक कौन है ? हिन्दी भाषा अनुच्छेद लेखन- सत्संगति का प्रभाव
SOCIAL STUDIES	**Ch.2 Russian Revolution** **Revision sheet** **Read the chapter thoroughly. Learn the question answers given below** 1. In what ways was the working population in Russia different from other countries in Europe, before 1917? Answer: The vast majority of Russia's population were agriculturists. About 85 per cent of Russian empires population earned their living from Agriculture. This proportion was higher than in most European countries. In France and Germany, the proportion was between 40 per cent and 50 per cent. Cultivators produced for the market as well as for their own needs and Russia were a major exporter of grain. 2. Why did the Tsarist autocracy collapse in 1917? Answer: After 1905, most trade unions and factory committees were declared illegal. There were restrictions on political activity. The Tsar dismissed the first 2 Dumas very quickly because he did not want his authority and powers to be questioned. The third Duma was filled with Conservative politicians. During the 1st world war, the tsar started taking unilateral decisions without consulting the Duma. While Russian soldiers were retreating from the war, large swathes of agricultural lands were burnt and buildings destroyed by them on the orders of Tsar. Millions of soldiers have also died in the battle. The large majority of the population were peasants, and the land was under the control of a few private people. All these factors led to the rise of revolution and the collapse of Tsar autocracy. 3. Make two lists: one with the main events and the effects of the February Revolution and the other with the main events and effects of the October Revolution. Write a paragraph on who was involved in each, who were the leaders and what was the impact of each on Soviet history. Answer: Main events of February Revolution: In February 1917, there was a shortage of food items in workers quarters. On February 22, a lockout took place at a factory on the right bank.

The workers in fifty factories called a strike and women played a very critical role in these strikes. This day went on to be named as International Women's Day. On February 25, the government suspended the Duma On February 27, Police headquarters were ransacked, people were demonstrating and raising slogans about bread, wages, better hours and democracy. Petrograd Soviet was formed. Tsar abdicated on March 2, Monarchy was formed in Feb 1917. Soviet leaders and Duma leaders formed a Provisional Government to run the country. Effects of the February Revolution: Restrictions on public meetings and associations were removed. 'Soviets' like the Petrograd Soviet, were set up everywhere, though no common system of election was followed. The number of trade unions increased. In Industrial areas, factory committees were formed to question the way industrialists ran their factories. Soldiers committees were formed in the Army.
The Bolsheviks' influence kept growing, and the provisional government saw its power reducing.
Land committees were formed to handle redistribution of land, which was a popular demand for peasants and their socialist revolutionary leaders in the countryside.
Main events of the October Revolution:
As the conflict between the provisional government and the Bolsheviks grew, Lenin feared the Provisional Government would set up a dictatorship. Lenin began discussions for an uprising against the government. Bolshevik supporters in the Army, Soviets and factories were brought together. On 16th October 1917, Lenin persuaded the Petrograd Soviet and the Bolshevik Party to agree to a socialist seizure of power. A military revolutionary committee was appointed by the Soviet under Leon Trotsky to organize the seizure. The uprising began on 24th October 1917. Military men who were loyal to the government seized the buildings of two Bolshevik newspapers. Pro-Government troops were sent to take over telephone and telegraph offices and protect the Winter Palace. In retaliation, the Military Revolutionary Committee ordered its supporters to seize government offices and arrest ministers. A ship named Aurora bombed the Winter Palace, other ships sailed down the Neva and took over various military positions. By the end of the month, the city was under the control of committee and ministers had resigned. By December, Bolsheviks controlled the Moscow-Petrograd area.

Effects of the October Revolution.
Industries and banks were nationalised by November 1917; Government took over ownership and management. The land was declared social property and peasants were allowed to seize the land of the nobility. In the cities, The Bolsheviks enforced the partition of large houses according to family requirements. Old titles of the aristocracy were banned.
New uniforms were designed for the army and officials. Bolshevik Party was renamed as the Russian Communist Party (Bolshevik) Bolsheviks conducted elections to the constituent assembly; however, they failed to attain the majority. The assembly rejected the Bolshevik measures, and Lenin dismissed the assembly. All Russian Congress of Soviets became the Parliament of the country. Russia became a one-party state. Trade unions were kept under party control. The Secret Police punished anyone who criticised the Bolsheviks. Many young artists and writers continued to support the Party, as it stood for Socialism.Many experiments were done in Arts and Architecture. But many were unhappy because of the censorship.

4. What were the main changes brought about by the Bolsheviks immediately after the October Revolution?

Answer: Industries and banks were nationalised by November 1917; Government took over ownership and management. The land was declared as a social property and peasants were allowed to seize the land of the nobility. In the cities, Bolsheviks enforced the partition of large houses according to family requirements. Old titles of the aristocracy were banned. New uniforms were designed for the army and officials. Bolshevik Party was renamed as the Russian Communist Party (Bolshevik)
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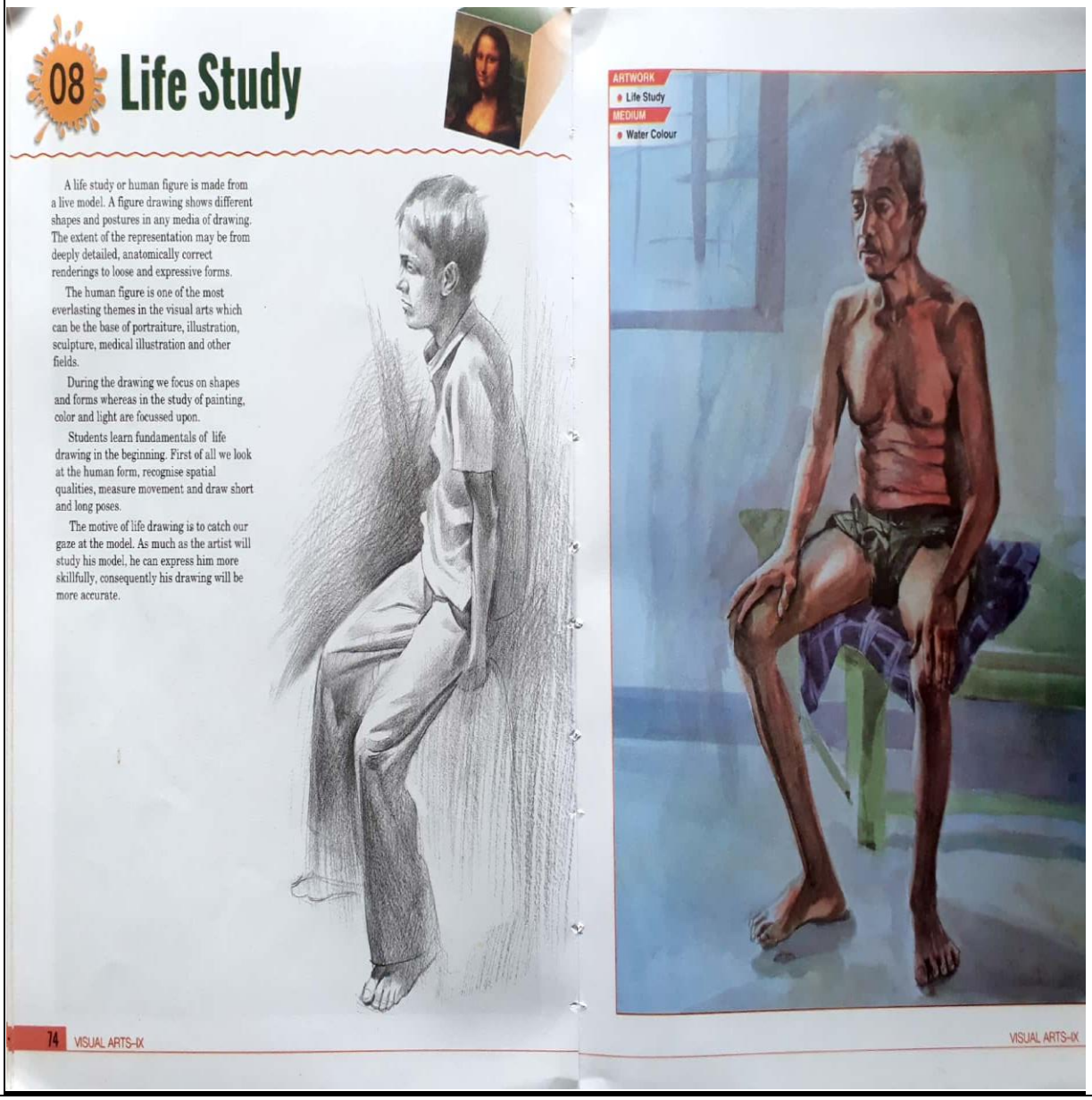
	majority, Assembly rejected the Bolshevik measures, and Lenin dismissed the assembly. All Russian Congress of Soviets became Parliament of the country. Russia became a one-party state. Trade unions were kept under party control, the Secret Police punished anyone who criticised the Bolsheviks. Many young artists and writers continued to support the Party as it stood for Socialism. Many experiments were done in Arts and Architecture. But many artists were unhappy because of the censorship. 5.Who were liberals? What were their political and social views? Or Liberals were not democrats. Explain. Answer: Liberals : One of the groups which looked to change society were the liberals. Political and Social Views of Liberals: • Liberals wanted a nation which tolerated all religions. • Liberals also opposed the uncontrolled power of dynastic rulers. They wanted to safeguard the rights of individuals against governments. • They argued for a representative, elected parliamentary government, subject to laws interpreted by a well-trained judiciary that was independent of rulers and officials. • However, they were not 'democrats'. They did not believe in universal adult franchise, that is, the right of every citizen to vote. They felt men of property mainly should have the vote. • They also did not want the vote for women.
COMPUTER	**Ch. 20: Working with slide master** **Answer the following Questions** 1. What is slide master? Ans. Slide Master is an elements of the template that stores information, including font-styles, placeholder sizes, position of text and objects, bullet styles, background design and colour schemes. 2. How can you change the colour of the background of a slide? Ans. The following steps can be followed to change the colour of the background of a slide: 1. Click on the Background Styles button present in the background group of the design tab.A list can be displayed. 2. Select the required background. 3. Click on the format background option of the background styles button. 4. Click on the color button.The color box appears. 5. Click on the format background dialog box.Click on apply to all button to apply the colour scheme to the slides. 3. Which option enables you to change the background of the text? Ans. Background styles button in the Background group of the slide master. 4. What do you mean by Transition? Ans. A slide transition is the visual effect that occurs when you move from one slide to the next during a presentation. Transition effects appears when one slide changes to the other during the slide show view.

DRAWING	Topic- life study Complete this drawing in your school drawing copy. 

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