

Bishop Scott Girls' School
(Affiliated to CBSE, New Delhi Upto 10+2)
Jaganpura, Brahmpura, By- Pass, Patna-27



Session: 2022 – 23

Summer Vacation

Holiday Homework

Class – IX

Note – Dear Parents and students, date of submission for holiday homework & assignments will be on the reopening day itself, i.e. on 20th June 2022 (Monday).

English

1	Do units 1to 6 & 8,10 & 11 given in English workbook, Words & Expression
2	Underline all the hard words of the chapters (Term-1) given in English Literature books, First Flight & Footprints and write their relevant meanings neatly in pencil.
3	Design an attractive portfolio of 15 pages on different topics.
4	Read all the chapters enlisted in Term-I thoroughly.

Hindi

Topic Number	(हिन्दी साहित्य)
1	"दो बैलों की कथा " पाठ का सार संक्षेप लिखकर उसे स्मरण करें।
2	"लहासा की ओर" पाठ का सार संक्षेप लिखकर उसे स्मरण करें।
3	"सबद " पाठ का भावार्थ लिखें तथा स्मरण करें।
4	"बाख" पाठ का भाव स्पष्ट करके उन्हें स्मरण करें।
(व्याकरण खंड)	
1	अव्ययीभाव, तत्पुरुष, बहुव्रीहि तथा कर्मधारय समास वाले 10 10 समस्त पद लिखिए तथा उसका समास विग्रह कीजिए।
2	रचना के आधार पर आठों प्रकार के वाक्यों वाले 10 10 वाक्य लिखिए।
3	संवाद शैली में ग्रीष्मावकाश का वर्णन अपने मित्र के साथ करें।
4	किसी भी संदर्भ में हिंदी में 10 ई-मेल तैयार करें।

पोर्टफोलियो	
1	पशु पक्षियों से संबंधित किन्हीं दो रचनाओं को लिखें जो आपकी पाठ्य पुस्तिका में न हो।
2	क्या आपको या आपके किसी परिचित हो घुमक्कड़ी या यायावरी का शौक है? यदि है तो उस शौक का आपकी या उसकी पढ़ाई या काम आदि पर क्या प्रभाव पड़ेगा?
3	अपनी पाठ्य पुस्तिका के पृष्ठ संख्या 31 में दिए गए अपठित गद्यांश को लिखिए तथा उनके प्रश्नों के उत्तर दीजिए।

4	आप प्रतिदिन टेलीविजन पर या अपने इर्द-गिर्द तथा बाजार में कई प्रकार के विज्ञापन देखते सुनते हैं। उनमें से कम से कम 10 वस्तुओं का चित्र बनाकर, उनके ऊपर विज्ञापन तैयार कीजिए।
5	किन्हीं पांच शीर्षक के अंतर्गत लघु कथा लेखन करें।

Mathematics

Sec A	
	Solve the following questions:
1.	Simplify: $1.2 + 0.2\bar{3} - 1.\bar{57}$
2.	Prove the following: i. $\left(\frac{x^a}{x^b}\right)^{\frac{1}{ab}} \left(\frac{x^b}{x^c}\right)^{\frac{1}{bc}} \left(\frac{x^c}{x^a}\right)^{\frac{1}{ca}} = 1$ ii. $\frac{(x^{a+b})^2 (x^{b+c})^2 (x^{c+a})^2}{(x^a x^b x^c)^4} = 1$
3.	Find the value of 'x' in the following equation: i. $25^{x-1} = 5^{2x-1} - 100$ ii. $3(2^x + 1) - 2^{x+2} + 5 = 0$
4.	Simplify: i. $(\sqrt{7} + \sqrt{2})(\sqrt{7} - \sqrt{2})^2$ ii. $(1^3 + 2^3 + 3^3)^{1/2}$
5.	Simplify: i. $\frac{\sqrt{17} + \sqrt{13}}{\sqrt{17} - \sqrt{13}} - \frac{\sqrt{17} - \sqrt{13}}{\sqrt{17} + \sqrt{13}}$
6.	Given $\sqrt{2} = 1.414$, $\sqrt{3} = 1.732$, $\sqrt{5} = 2.236$, $\sqrt{10} = 3.162$, $\sqrt{6} = 2.449$, find the

	<p>value of the following:</p> <p>i. $\frac{3+2\sqrt{2}}{7+4\sqrt{3}}$</p> <p>ii. $\frac{1}{3\sqrt{5}-4\sqrt{3}}$</p>
7.	If $x = 4\sqrt{3} + 7$, find the value of $x^2 + \frac{1}{x^2}$
8.	If $p = 3 + 2\sqrt{2}$, find the value of $p^2 - \frac{1}{p^2}$
9.	<p>If $m = \frac{3-\sqrt{7}}{3+\sqrt{7}}$ find the value of</p> <p>i. $m^2 + \frac{1}{m^2}$</p> <p>ii. $m^2 - \frac{1}{m^2}$</p>
10.	Simplify $\frac{\sqrt{17}+\sqrt{13}}{\sqrt{17}-\sqrt{13}} - \frac{\sqrt{17}-\sqrt{13}}{\sqrt{17}+\sqrt{13}}$
Sec B(Portfolio)	
11.	<p>Define rational and irrational numbers, give examples.</p> <p>What are terminating and non terminating numbers? Give examples. Also write about types of non-terminating numbers, with examples.</p> <p>Represent $\sqrt{8.5}$ on number line geometrically</p> <p>Construct square root spiral starting from $\sqrt{2}$ and ends to $\sqrt{7}$.</p> <p>Write the Euclid's Axiom (seven) and Euclid's Postulates (five).</p> <p>Do all the above in A4 sheet papers.</p>
Sec B(lab manual)	
12	To verify experimentally the identity $a^3 + b^3 = (a + b)(a^2 + b^2 - ab)$
13	To verify experimentally the identity $(a + b)^3 = a^3 + 3a^2b + 3ab^2 + b^3$
14	To verify that the quadrilateral obtained by joining the midpoints of a quadrilateral is a parallelogram.
15	To obtain mirror images of figures with respect to a given line.
Sec D(Rs Aggarwal)	
16	Do Ex- 1F and 1G.

Physics

1. (a) Identify the kind of motion in the following cases:
(i) A car moving with constant speed turning around a curve.
(ii) An electron orbiting around nucleus.
(b) An artificial satellite is moving in a circular orbit of radius 36,000 km. Calculate its speed if it takes 24 hours to revolve around the earth.
2. (a) Define average speed.
(b) A bus travels a distance of 120 km with a speed of 40 km/h and returns with a speed of 30 km/h. Calculate the average speed for the entire journey.
3. Define uniform and non-uniform motion. Write one example for each.
4. What does the odometer of an automobile measure? Which of the following is moving faster? Justify your answer.
(i) A scooter moving with a speed of 300 m per 1 minute.
(ii) A car moving with a speed of 36 km per hour.
5. A car travels from stop A to stop B with a speed of 30 km/h and then returns back to A with a speed of 50 km/h. Find
(i) displacement of the car.
(ii) distance travelled by the car.
(iii) average speed of the car.
6. Velocity-time graph for the motion of an object in a straight path is a straight line parallel to the time axis.
(a) Identify the nature of motion of the body.
(b) Find the acceleration of the body.
(c) Draw the shape of distance-time graph for this type of motion.
7. Draw the shape of the distance-time graph for uniform and non-uniform motion of object. A bus of starting from rest moves with uniform acceleration of 0.1 ms^{-2} for 2 minutes. Find
(a) the speed acquired.
(b) the distance travelled.
8. (a) Define uniform acceleration. What is the acceleration of a body moving with uniform velocity?
(b) A particle moves over three quarters of a circle of radius r. What is the magnitude of its displacement?
9. A bus accelerates uniformly from 54 km/h to 72 km/h in 10 seconds Calculate
(i) acceleration in m/s^2
(ii) distance covered by the bus in metres during this interval.
10. A car moves with a speed of 30 km/h^{-1} for half an hour, 25 km/h^{-1} for one hour and 40 km/h^{-1} for two hours. Calculate the average speed of the car.
11. Derive the equation for velocity-time relation ($v = u + at$) by graphical method.
12. A car is travelling at 20 km/h, it speeds upto 60 km/h in 6 seconds. What is its acceleration?
13. A car accelerates from 6 ms^{-1} to 16 ms^{-1} in 10 sec. Calculate
(a) the acceleration and
(b) the distance covered by the car in that time.
14. A circular track has a circumference of 3140 m with AB as one of its diameter. A scooterist moves from A to B along the circular path with a uniform speed of 10 m/s. Find
(a) distance covered by the scooterist,

- (b) displacement of the scooterist, and
- (c) time taken by the scooterist in reaching from A to B.

15. (a) Differentiate between uniform linear and uniform circular motion.

- (b) Write any four examples of uniform circular motion.
- (c) Is uniform circular motion accelerated motion?

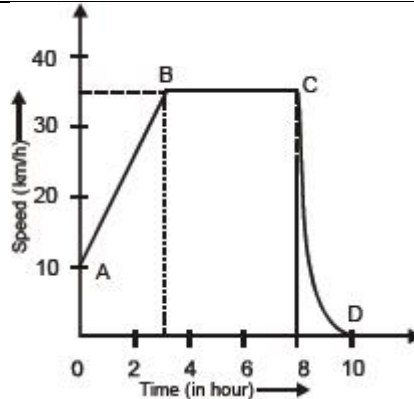
16. (a) Differentiate between speed and velocity.

- (b) When is a body said to have uniform velocity?
- (c) How can we describe the position of an object?

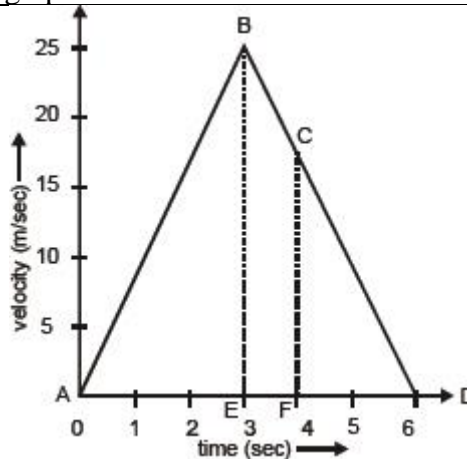
Illustrate with suitable example.

17. The graph given alongside shows how the speed of a car changes with time.

- (i) What is the initial speed of the car?
- (ii) What is the maximum speed attained by the car?
- (iii) Which part of the graph shows zero acceleration?
- (iv) Which part of the graph shows varying retardation?
- (v) Find the distance travelled in first 8 hours.



18. Study the velocity-time graph and calculate.



- (a) The acceleration from A to B
- (b) The acceleration from B to C
- (c) The distance covered in the region ABE
- (d) The average velocity from C to D
- (e) The distance covered in the region BCFE

19. The following table gives the data about motion of a car.

Time	11.00	11.30	12.00	12.30	1.00
(h)					

Distance (km)	0	30	30	65	100
Plot the graph.					
(i) Find the speed of the car between 12.00 hours and 12.30 hours.					
(ii) What is the average speed of the car?					
(iii) Is the car's motion an example of uniform motion? Justify.					
20. (a) Derive the equation of motion $v = u + at$, using graphical method.					
(b) A train starting from rest attains a velocity of 72 km/h in 5 minutes. Assuming the acceleration is uniform, find					
(i) the acceleration.					
(ii) the distance travelled by the train for attaining this velocity.					

Chemistry

1	How to separate two immiscible liquids?
2	Why is water called a universal solvent?
3	Give the differences between true solution, colloidal solution and suspension?
4	Draw a flow diagram to show the water purification system in water works.
5	Give two applications of centrifugation.
6	How can you prove that water is a compound?
7	How can we convert saturated solution into unsaturated by heating?
8	What is the difference between fog and smoke?
9	Show the different types of colloids with examples.
10	What is Tyndall effect?
11	How to separate ammonium chloride+ sodium chloride. Explain briefly.
12	What is tincture of iodine?
13	Explain about 'concentration of a solution'?
14	State the principle for separation of immiscible liquids?
15	Why a mixture is an impure substance?
16	Define aerosol.
17	What is meant by solubility of a solute?
18	How to differentiate between sol, solution and suspension?
19	What is meant by chromatography?
20	Define emulsion with example.

Biology

01	Nucleolus is rich in a) protein only b) protein and DNA c) protein and RNA d) RNA only
02	Secretion of enzymes, mucous and hormones is done by a) golgi apparatus b) mitochondria c) ribosomes d) plastids
03	The air-filled tissue of aquatic plants are called a) collenchyma b) chlorenchyma c) aerenchyma d) sclerenchyma
04	Tendons connect a) bone to bone b) bone to muscle c) nerve to muscle d) muscle to muscle
05	What is significance of plasma membrane ?
06	Why is smooth muscle also called non – striated muscle?
07	What is characteristic feature of meristematic cells?
08	There would be no plant life if chloroplasts did not exist. Justify.
09	Explain how endosmosis is different from exosmosis with suitable example.
10	How are simple tissue different from complex tissue in plants ?
11	What is a protective tissue ? Why is epidermis considered as protective tissue ?
12	What are isotonic, hypotonic and hypertonic solutions ?
13	Why do the animal cells not have cell wall?
14	Why is the Golgi apparatus called the secretory organelle of the cell
15	What is the significance of pores present on the nuclear membrane ?
16	What are secretory proteins? Give an example of secretory protein?
17	Do you agree “A cell is a building unit of an organism”. If yes, explain why?
18	If you are provided with some vegetables to cook, you generally add salt into the vegetables. After adding salt, vegetables release water. Why
19	Draw a labelled diagram of mitochondria. Write the functions of mitochondria.
20	What is active transport? Differentiate between active and passive transport.?

Social Science

1	How was the National Assembly recognised and how did it start exercising its power?	3 Marks Questions
2	Write a short note on the tennis court oath in France.	
3	Explain the turmoil in France while the National Assembly was busy at Versailles.	
4	What do you mean by subcontinent? Why India is known as subcontinent?	
5	Why is the difference between the duration of day and night hardly felt at kanyakumari but not so in Kashmir?	
6	Right the size and extent of India.	
7	Distinguish between Himadari and Himachal Himalaya.	
8	Describe the process of formation of Himalaya with the help of diagram.	
9	Why China is called a non democratic country.	
10	Explain any three harmful effects of green revolution.	
1	Enlist all the physiographic divisions of India. Explain any one of them.	5 Marks Questions
2	Write any five features of peninsular plateau of India.	
3	Why 82 degree 30 minutes East has been selected as the standard Meridian of India	
4	Describe the significance of India's location over the head of Indian Ocean.	
5	Explain with example the occupational structure of India's population.	
6	Describe any five circumstances that led the French Revolution in France.	
7	Explain the condition of women in France, before and after the French Revolution	
8	Describe the legacy of French Revolution to the world.	
9	What is the aim of production? State any four requirements for production.	
10	Explain any five arguments in favour of democracy.	

Topic Number	Topic Assigned
1	a) On an outline map of France locate and label the following- (i) Ports of France related to the slave trade (ii) Capital of France (iii) A place where volunteers sang national anthem of France b) What values were reflected by declaration of the rights of man and citizen?
2	(a) On an outline map of the world show the Russian empire and the European countries at war during the First world war. (b) Analyze the reason for Stalin's unpopularity in the Soviet Union
3	a) On an outline map of India locate and label the following with appropriate symbols. i) The states through which the Tropic of Cancer passes ii) The Union Territories of India iii) The strait separating Sri Lanka

	from India b) Explain the significance of India's eminent position in the Indian Ocean.
4	i) 'The land of India is characterised by a great diversity in its relief or physical features'. Justify the statement. ii) On an outline map of India, show the following Peaks - K2, Kanchenjunga, Nanga Parbat, and the Ana Mundi Mountain Range-Karakoram Range, Vindhyan Range, Satpura Range, Western Ghats c) Plateaus – Chhottanagpur Plateau, and Malwa Plateau d) The Indian Desert, Western Ghats, Lakshadweep Islands
5	How did Motilal Nehru report (1928)and resolution of Karachi session (1931)of the Indian National Congress shape the Indian Constitution. Describe the working of Constituent Assembly which gave sanctity to the constitution.
6	a) Compare The Preambles to the Constitution of the United States Of America, India and South Africa
7	Soil is an important natural resource. It takes millions of years to form soil up to a few centimeters in depth. Hence ,it is essential to conserve soil at all cost. What steps can be taken in this regard? Explain.
8	List the causes of Unemployment in India.

Computer

1.	Make a banner on BSGS and take its printout.
2.	Make a pamphlet on opening of a new restaurant and take its printout.
3.	Design the cover page of the computer book and take its printout.
4.	Write a short note on the followings in separate A4 papers. i. Undo and redo ii. Change Case iii. Header and Footer iv. Margin and indents v. Mail merge