

GANGA INTERNATIONAL SCHOOL
HOLIDAY HOMEWORK-X

ENGLISH

1. Write an Acrostic Poem using your name on colourful A4 size paper.
2. Make detailed project on the following authors/poets on A4 size sheets and arrange it properly in a file. (Include life history, famous works, photographs etc.) Do according to your Roll number.
 - William Shakespeare (Roll No. 1-9)
 - Saki (H.H. Munro) (Roll No. 10-18)
 - Satyajit Ray (Roll No. 19-27)
 - Percy Bysshe Shelly (Roll No. 28-36)
 - Vikram Seth (Roll No. 37-45)
3. Make a list of Twenty English proverbs and their meanings. Choose the theme according to your Roll Number. Do on colourful A4 size sheet.
 - Health (Roll No. 1-9)
 - Wisdom (Roll No. 10-18)
 - Friendship (Roll No. 19-27)
 - Unity (Roll No. 28-36)
 - Time (Roll No. 37-45)
4. Make a list of ten unusual professions and give details about them. (Include educational qualification required, future prospects, job demands etc.)
5. Now a days one of the most important discussions in every family is choice of different stream by a child after his/her 10 class results. Develop a humorous conversation among parents and children over the concern for studies.
6. Write articles on the following topics with the help of the given points. (Write on A4 size sheet)
 - Afforestation is the answer to Global Warming
 - Plant trees and nurture them
 - Organisation of 'Van Mahotsav' in schools
 - Use tree guards
 - Ban cutting of green trees
 - Nails/iron plates not to be used
 - Create awareness camps
 - Adult Education in India
 - India biggest democracy but majority illiterate
 - Main cause of superstition, ignorance, backwardness
 - Illiterates easily misled by politicians
 - Cannot benefit from modern technology—poor remain poor
 - Adult education for grown-ups, unable to go to school
 - Most of them farmers and factory workers
 - Enable them to read, write and calculate; vocational training
 - Night schools can be opened
 - Make it a mass movement
7. Read the novel 'The Diary of A Young Girl', Make notes on each chapter using abbreviations.
8. Make a mind map of the novel by writing the chapter number, title and four main points on white sheet. It will help you to memorize the novel easily for the oral test/quiz.
9. Make a collection of 25 inspirational thoughts. Submit the soft copy (in pen drive) to the concerned teacher.
10. Read a book of any Indian Writer in English Literature and write the book review.
11. Write character sketch of the Hero and Heroine of the story.
12. Pick 50 difficult words from the book and write their English meanings from the dictionary.
13. Visit any monument of historical importance and write a report.

14. Write your experience in the form of a diary entry.
15. Write the historical importance of the monument.
16. Interview the foreign visitors there at the site and also paste photographs with them.
17. Write speech on the topic 'My Planet, My Responsibility'.
18. Read newspaper daily and paste twenty news from 'Sports or Politics' each in a scrapbook.
19. Cut and paste 5 news about language in the scrapbook.
20. Compose a beautiful poem on 'Childhood'.
21. Collect five inspiring short stories with moral lesson for publication in the school magazine.
22. Write/ collect inspiring poems on every day themes.
23. Bring twenty quotations which have not been published in Akashganga or Gyanganga mentioning their sources, for contributing to Akashganga.
24. Collect five inspiring stories of human endurance and grit for contributing to Akashganga.
25. Browse the internet to get the latest efforts and innovations to save the environment in India and abroad, organize a presentation.

Note: -. The question numbers 1, 2 and 3 have to be submitted in the CD with your admission number, name, class, section and your picture in the school uniform.

हिन्दी

- (1) 'शेखर-एक जीवनी' व 'त्यागपत्र' उपन्यास पढ़िए।
- (2) देशभक्ति पर आधारित दो कविताएं लिखिए।
- (3) उन लोगों की सूची बनाइए जिन्होंने स्वतंत्रता आन्दोलन में भागीदारी दी (कोई दस चित्र)।
- (4) अपनी किसी भी रोचक यात्रा का वर्णन कीजिए।
- (5) विश्व के दर्शनीय स्थलों की सूची सचित्र बनाइए।
- (6) जनहित में जारी विज्ञापन समाचार पत्रों या विभिन्न पत्र-पत्रिकाओं में से काटकर चिपकाएं। (कोई पांच)
- (7) 'सड़क सुरक्षा' विषय पर एक सचित्र स्लोगन तैयार कीजिए।
- (8) अपने विद्यालय के वार्षिकोत्सव के लिए एक निमंत्रण पत्र तैयार कीजिए।
- (9) कोई एक सुन्दर विज्ञापन तैयार कीजिए।
- (10) विभिन्न पत्रिकाओं में से स्वास्थ्य संबंधी जो भी जानकारी मिले उसे सचित्र काटकर-अपनी फाइल में लगाइए।
- (11) कोई एक औपचारिक पत्र लिखिए।
- (12) कोई एक अनौपचारिक पत्र लिखिए।
- (13) अपने प्रिय पशु या पक्षी का वर्णन सचित्र कीजिए।
- (14) कवि सूरदास के कोई पांच पद सचित्र लिखिए।
- (15) कवयित्री मीरा द्वारा रचित कोई दो पद लिखिए।
- (16) श्रीकृष्ण का बाल वर्णन से संबंधित सुन्दर पद लिखिए।
- (17) 'मां के प्रति प्रेम से संबंधित एक कविता लिखिए।
- (18) कवि तुलसीदास के पद लिखिए। ;पाठ्य-पुस्तक से न होकर
- (19) भारत के प्रमुख स्थलों के चित्र एकत्रित कर ए-4 शीट पर चिपकाइए।
- (20) 'संक्रमण पर आधारित बीमारियों' पर एक पोस्टर तैयार करें।

MATHEMATICS

Note: DO ALL THE QUESTIONS ON A4 SIZE SHEETS.

1. The product of two successive multiples of five is 300. Determine the multiples.
2. A journey of 192 km between two cities takes two hours less by a fast train than by a slow train. If the average speed of the slow train is 16 km/h less than that of the fast train, find the average speed of each train.

- 3.a. Two numbers differ by 2 and their product is 360. Find the numbers.
- b. The sum of a number and its positive square root is 72. Find the number.
4. A cyclist moving 9 km/hr in still wind goes 16 km in the direction of wind and comes back against the wind in total of 4 hours. Determine the speed of the wind.
5. Solve the following system of linear equations graphically: $x + 2y = 1$, $x - 2y = -7$. Find the points where the lines meet x-axis.
6. Solve the following system of equations graphically. $3x + 2y = 8$, $2x - 3y = 1$
7. Solve (Surface area and Volume)
- i. A solid cylinder has a total surface area of 213 cm². Its curved surface area is $\frac{2}{3}$ of the total surface area. Find the volume of the cylinder.
 - ii. The dimensions of a cuboid are in the ratio 1: 2: 3 and its total surface area is 88 m². Find the dimensions.
 - iii. The radius and height of a cone are in the ratio 4: 3. The area of the base is 154 cm². Find the area of the curved surface.
 - iv. A hemispherical bowl of internal diameter 36 cm contains a liquid. This liquid is to be filled in cylindrical bottles of radius 3 cm and height 6 cm. How many bottles are required to empty the bowl?
 - v. A wooden toy is in the form of a cone surmounted on a hemisphere. The diameter of the base of the cone is 6 cm and its height is 4 cm. Find the cost of painting the toy at the rate of Rs. 5 per 1000 cm².
 - vi. Three cubes of each side 4 cm are joining end to end. Find the surface area of resulting cuboid.
 - vii. If the radius of a sphere is doubled, what is the ratio of the volume of the first sphere to that of the second sphere?
 - viii. A solid cylinder has a total surface area of 213 cm². Its curved surface area is $\frac{2}{3}$ of the total surface area. Find the volume of the cylinder.
 - ix. The dimensions of a cuboid are in the ratio 1: 2: 3 and its total surface area is 88 m². Find the dimensions.
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 - xi. A hemispherical bowl of internal diameter 36 cm contains a liquid. This liquid is to be filled in cylindrical bottles of radius 3 cm and height 6 cm. How many bottles are required to empty the bowl?
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 - xiii. Three cubes of each side 4 cm are joining end to end. Find the surface area of resulting cuboid.
 - xiv. If the radius of a sphere is doubled, what is the ratio of the volume of the first sphere to that of the second sphere?
 - xv. The area of three adjacent faces of a cuboid are x, y and z. If the volume is V,
 - xvi. prove that $V^2 = xyz$.
 - xvii. A wall of the length 10 m was to be built across an open ground. The height of the wall is 4 m and thickness of the wall is 24 cm. If this wall is to be built up with bricks whose dimensions are 24 cm x 12 cm x 8 cm, how many bricks would be required?
 - xviii. How many litres of water flow out of a pipe having an area of cross-section of 5 sq cm. in one minute if the speed of the water in the pipe is 30 cm/sec?
 - xix. A circular tent is cylindrical to a height of 3 metres and conical above it. If its diameter is 105 m and the slant height of the conical portion is 53 m, calculate the length of canvas 5 m wide to make the required tent.
 - xx. The radius and slant height of a cone are in the ratio 4:7. If its curved surface area is 792 sq cm, find its radius.

- xxi. A powder tin is in cylindrical shape, whose base has a diameter of 14 cm and height 20 cm. A label is wrapped around the surface of the container. If the label is pasted leaving 2 cm from the top and the bottom. What is the area of the label?
- xxii. A sphere of diameter 7 cm is dropped in a right circular cylinder vessel partly filled with water. The diameter of the cylindrical vessel is 14 cm. If the sphere is completely submerged in water, by how much will the level of water rise in the cylindrical vessel?
- xxiii. The diameter of a sphere is decreased by 50%. By what percent will its curved surface area decrease?
8. If two zeroes of the polynomial $x^4 - 6x^3 - 26x^2 + 138x - 35$ are $2 \pm \sqrt{3}$, then find the other zeroes.
9. When a polynomial $6x^4 + 8x^3 + 17x^2 + 21x + 7$ is divided by the another polynomial $3x^2 + 4x + 1$, the remainder is in the form $ax + b$. Find a and b.
10. a. If α and β are the zeroes of the polynomial $f(x) = x^2 - 5x + k$ such that $\alpha - \beta = 1$, find the value of k?
b. If α and β are the zeroes of the polynomial $3x^2 + 5x + 2$, find the value of $(1/\alpha + 1/\beta)$.
11. If $7 \times 5 \times 3 \times 2 + 3$ is composite number? Justify your answer.
12. Show that 8^n cannot end with the digit zero for any natural number n
13. Factorise:
a. $2a^7 - 128a$
b. $4p^2 + 9q^2 + 16r^2 + 12pq - 24qr - 16rp$
c. $64a^3 - 27b^3 - 144a^2b + 108ab^2$
14. Show that the following are irrational number
a. $5 - 2\sqrt{3}$
b. $\sqrt{3}/2 + 5$
c. $\sqrt{5}$
15. The median of the following observations arranged in ascending order, is 25. find x. 11, 13, 15, 19, x + 2, x + 4, 30, 35, 39, 46
16. The mean of 1, 7, 5, 3, 4 and 4 is m. the numbers 3, 2, 4, 2, 3, 3, and p have mean m - 1 and median q. find p and q.
17. In the following groups of data, tell whether the mean or the median best describes the data:
(i) 6, 4, 2, 12, 2
(ii) 31, 28, 24, 9, 23
(iii) 45, 51, 47, 65, 36
(iv) 10, 20, 30, 100, 9
18. SOLVE
i. In triangle ABC, AD is a median. If the area of $\triangle ABD$ is 15 cm sq. then find the ar($\triangle ABC$).
ii. ABCD is a parallelogram and BPC is a triangle with P falling on AD. If the area of parallelogram ABCD = 26 cm^2 , find the area of triangle BPC.
iii. PQRS is a parallelogram and PQT is a triangle with T falling on RS. If area of triangle PQT = 18 cm^2 , then find the area of parallelogram PQRS.
iv. ABCD is a parallelogram where E is a point on AD. Area of $\triangle BCE = 21 \text{ cm}^2$. If CD = 6 cm, then find the length of AF.
v. The area of $\triangle ABC = 32 \text{ cm}^2$. AD is a median and E is the mid-point of AD. Find the area of $\triangle BED$.
vi. ABCD is a parallelogram and BC is produced to a point Q such that AD = CQ. If AQ intersects DC at P, show that area of $\triangle BPC =$ area of $\triangle DPQ$.
vii. Area of triangle ABC = 24 cm^2 . F, E and D are the midpoints of sides AB, AC, BC respectively. Find the area of triangle EFD and of parallelogram BDEF.
viii. Find the area of trapezium whose parallel sides 9cm and 5cm respectively and the distance between these sides is 8cm.
19. The following data has been arranged in ascending order: 24, 27, 28, 31, 34, x, 37, 40, 42, 45.

20. If the median of the data is 35, find x. in the above data, if 45 is changed to 33, find the new median.
21. a. For what value of x, the mode of the following data is 5? 2, 4, 3, 5, 4, 5, 6, 4, x, 7, 5
 b. A boy scored the following marks in various class tests during a term, each test being marked out of 20: 16, 10, 7, 17, 9, 16, 14, 19, 20, 18, 12 Find the mean, median and mode.

ACTIVITY BASED QUESTIONS

1. Prepare a square root spiral for $\sqrt{15}$. (roll no 1-5)
2. Solve any 10 Maths crossword puzzle from any newspaper. (roll no- 6-10)
3. Prepare a PPT on trigonometric ratios. (roll no 10-15)
4. Make a chart on trigonometric identities.(roll no 16-20)
5. Prepare a survey on fare charge for journey for different stations by metro. (roll no 21-25)
6. COORDINATE GEOMETRY (Roll No. 26– 30)

Make an illustrative project file for the following: i. Collect 10 cuttings of two dimensional objects (triangles/various types of quadrilaterals) from the newspapers/magazines etc. and paste them on separate graph sheets.

- ii. Locate their vertices using coordinate axes.
- iii. Find the length of their sides using ruler and calculate their area.

7. STATISTICS (Roll No. 30 – 40)

Make an illustrative project file for the following:

- i. Choose any 5 wards from South Delhi Municipal Corporation.
- ii. Find the number/names of candidates who contested for the elections from these wards.
- iii. Note their ages and prepare a frequency distribution table for the same taking 25 - 30 as one of the intervals.
- iv. Find the mean, median and mode of the above data.
- v. Construct histogram and frequency polygon for the same taking ages (in years) on x axis and number of candidates on y axis.
- vi. Collect information about qualification of these candidates and prepare a 'pie chart' under the following categories: Illiterate, up to class 10th, up to class 12th, graduate, post graduate and professionals.

8. VOLUMES AND SURFACE AREAS (Roll no 40-50) Make an illustrative project file for the following:

- i. Choose any 5 objects which are a combination of two or more 3D shapes (cuboid, cube, cylinder, cone, sphere and hemisphere).
- ii. Measure their dimensions (round off to nearest natural number) and note them in your file.
- iii. Calculate the curved/lateral and the total surface area of these solids
- iv. Also, find the volume of these solids.
- v. Click pictures of the objects chosen and paste them along with the calculations. (You may also draw the pictures of the objects.)

SOCIAL SCIENCE

HISTORY

- 1.The students have to visit a historical monument or Museum. And make a project on that as well as they have to paste pictures in school uniform with friends (school) in it.
2. Prepare the Historical timeline on the given topics in their textbook.
- 3.Collect the newspaper cutting on any news, article, and event related to History and write the 10 summary of any historical show.
- 4.Locate the Important cities and countries mentioned in your book on political map.
- 5.Prepare a collage on any Historical event included in the syllabus on A2 size pastel sheet.

GEOGRAPHY

1. Prepare one poster on Rain Water Harvesting
2. On the political map of India identify:
 - a) Major areas of Rice and Wheat
 - b) Major producer state of Sugarcane, Tea, Coffee, Rubber, Cotton and Jute
3. Visit the village in your nearby area and take feedback of crop production according to Seasons.
4. Make the list of major Highways and their Route numbers.
5. Write the details six waterways in India.

POLITICAL SCIENCE:

1. Follow a newspaper for at least 10 days and collect reports, editorials and articles on the following topics –
 - a) Criticism of democracy/government.
 - b) Power sharing between centre and state governments.
 - c) Activity of any pressure group (protest, strike, social movement etc.)
2. Identify and shade three federal countries on a blank outline political map of the world.
3. Watch a debate on Lok Sabha TV or Rajya Sabha TV (or search the web) and note the following-
 - a) Which session of parliament was going on?
 - b) Which leaders were participating in the debate? Which political party they belonged to?
 - c) Give a brief introduction of the topic of discussion.
4. Collect some news articles related to internal conflict in India (eg Naxalite problem in central India) and make a collage. Also answer the following questions-----
 - a) What is the reason of such conflicts?
 - b) Suggest some ways to solve such problems.
5. Prepare a report on Panchayati Raj system of India.

ECONOMICS

1. Visit banks and money lenders/pawn brokers and discuss various activities that you have observed. Discuss it in the classroom.
2. Provide many examples of service sector activities. Use numerical eg. Charts and photographs.
3. Collect logos of standards available for various goods and services. Visit a consumer court nearby and write its proceedings.
4. Collect stories of consumer exploitation /grievances from newspaper.
5. Observe your neighbourhood for examples of environment degradation and do the following ----
 - a) Collect some photographs of the same
 - b) Explain your observation.
 - c) Suggest some ways to prevent it.

SCIENCE

1. Make a powerpoint presentation on different sources of energy.
2. Make a working model on electric circuit.
3. Make a chart on different symbols of different components used in an electric circuit.
4. Make a scrapbook on life and achievements on Michael Faraday.
5. Resistance of a metal wire of length 1m is 26 ohm. If the diameter of the wire is 0.3mm, what is the resistivity of the metal?
6. A hot plate of an electric oven connected to a 220V line has two resistance coil A and B each of 24 ohm connected in parallel. What is the current?
7. An electric bulb is rated 60W-220V. Calculate the power consumed by four such electric bulbs.
8. 6 tubelights of 40W each and four fans of 100W each operate on an average of 10hrs a day, If the energy cost in Rs3/unit. Calculate the monthly bill for the June.
9. Make a chart on any one topic- a) List of acid and base b) Periodic table c) Reactivity series
10. Prepare a power point presentation on the topic corrosion.

11. Solve the following assignment:

a) Metal nitrate 'A' on heating gives yellowish brown coloured metal oxide along with brown gas 'B' and a colourless gas 'c'. aqueous solution of 'A' on reaction with potassium iodide gives a yellow precipitate of compound 'D'. identify A, B, C, D. also identify types of both reaction. metal present in 'A' is used in alloy which is used for soldering purpose.

b) Explain two ways by which food industries prevent rancidity.

c) Give the characteristic tests for the following gases:

i) CO_2 ii) SO_2 iii) O_2 iv) H_2

d) Why do fireflies glow at night?

e) A substance 'X' which is an oxide of group 2 element is used intensively in the cement industry. This element is present in bones also. On treatment with water, it forms a solution which turns red litmus blue. Identify X and also write the chemical reaction involved.

f) What happen when a piece of i) Zinc metal is added to copper sulphate solution? ii) Aluminium metal is added to dilute hydrochloric acid? iii) Silver metal is added to copper sulphate solution. Also write the balanced equation if the reaction occurs.

12. "We need to balance a skeletal chemical equation". Give reason to justify this statement.

13. A small quantity of light green coloured substance is heated. in the beginning, it loses some water and then suffocating gas is evolved and a red residue is left behind. Answer the following:

a) Name the red residue and write its formula.

b) Name the suffocating gas or gases and write its formula.

c) Name the light green coloured substance and write its formula.

14. Give reasons for the following;

a) Blue colour of copper sulphate solution is destroyed when iron fillings are added to it.

b) On adding a drop of barium chromate solution to an aqueous solution of sodium sulphite, white precipitate is obtained.

15. A metal carbonate X on reacting with an acid gives a gas which when passed through a solution Gives the carbonate back. On the other hand, a gas G that is obtained at anode during electrolysis of brine is passed on dry Y; it gives a compound Z, used for disinfecting drinking water. Identify X, Y, G and Z.

16. Prepare a working model either of respiratory system or heart.

17. Prepare a chart i) Excretory system ii) Digestive system

18. Prepare a report on various parts of Brain mentioning various functions, disorders and their prevention and cure.

19. Prepare a chart to show various modes of asexual reproduction.

20. Prepare an investigation report on female reproductive health and its related issues prevailing in the present society.