



Affiliation No : 330881

GD GOENKA PUBLIC SCHOOL
Under the Aegis of G D Goenka Group , New Delhi **PURNEA**



CLASS IX

**HOLIDAY
ENGAGEMENT 2024**

HIGHER | STRONGER | BRIGHTER



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G D GOENKA PUBLIC SCHOOL, PURNEA

HOLIDAY ENGAGEMENT 2024-25

CLASS- IX

HINDI

- 1- 'अतिथि देवो भवः' उक्ति की व्याख्या करें तथा आधुनिक युग के संदर्भ में इसका आकलन अनुच्छेद के रूप में A4 साइज पेपर पर पूर्ण करें।
- 2- एवरेस्ट मेरी शिखर यात्रा पाठ के आधार पर एवरेस्ट का चित्र बनाए एवं बछेंद्री पाल के यात्रा वृतांत को A4 साइज पेपर पर लिखें।

ENGLISH:

ENGLISH LANGUAGE AND LITERATURE



Note:

- ★ Do not get your work done by your parents or seniors. It must be the effort of the child . Parents must act as guides and facilitators but not substitutes to do the work.
- ★ Project work should be seen as an interesting activity that helps in mental and physical development of the child.
- ★ Compile all the work completed in a file (either you can bind it or clip it). Use A 4 size paper for all the writing work.



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Creative writing

Q.1 We all get dreams while sleeping. We forget most of them but we can remember a few of them. Describe a dream you remember well. You can draw the images to make it more happenings.

Reading and Paraphrasing

Q.2 Read “Maria sarapova” page 104 in your Beehive and review it on the basis of the following points.

- (i) Biography of Maria Sarapova.
- (ii) Mental qualities of Maria Sarapova
- (iii) The Chapter of her life that inspired you the most)



Listening and Reporting

Q3. Switch on the address of the link given below and report the hearing briefly using your own words.



Website Link:

- (1) Ratan tata inspirational video/Motivational speech/Rules of success/start up stories

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SANSKRIT

परियोजना – कार्यम् (Project Work)

क) पञ्च वाद्ययन्त्राणां चित्राणि रचयित्वा संकल्य वा तेषां परिचयो लेखनीयाः।

{Paste the five Musical Instruments & write one or two sentences for each in Sanskrit.}

ख) उद्यमस्य विषये पञ्च श्लोकान् संकल्य स्वर्णाक्षरेण लेखितव्यम्।

{Write five shlokas in the subject of the “enterprise” in beautiful handwriting.}

COMPUTER APPLICATION

Open a document and type the following text:

What is AI?

Artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems. Specific applications of AI include expert systems, natural language processing, speech recognition and machine vision.

How does AI work?

As the hype around AI has accelerated, vendors have been scrambling to promote how their products and services use it. Often, what they refer to as AI is simply a component of the technology, such as machine learning. AI requires a foundation of specialized hardware and software for writing and training machine learning algorithms. No single programming language is synonymous with AI, but Python, R, Java, C++ and Julia have features popular with AI developers.

In general, AI systems work by ingesting large amounts of labeled training data, analyzing the data for correlations and patterns, and using these patterns to make predictions about future states. In this way, a chatbot that is fed examples of text can learn to generate lifelike exchanges with people, or an image recognition tool can learn to identify and describe objects in images by reviewing millions of examples. New, rapidly improving generative AI techniques can create realistic text, images, music and other media.

AI programming focuses on cognitive skills that include the following:

Learning. This aspect of AI programming focuses on acquiring data and creating rules for how to turn it into actionable information. The rules, which are called algorithms, provide computing devices with step-by-step instructions for how to complete a specific task.



Reasoning. This aspect of AI programming focuses on choosing the right algorithm to reach a desired outcome.

Self-correction. This aspect of AI programming is designed to continually fine-tune algorithms and ensure they provide the most accurate results possible.

Creativity. This aspect of AI uses neural networks, rules-based systems, statistical methods and other AI techniques to generate new images, new text, new music and new ideas.

Differences

- i. Save the document as Wordl.odt.
- ii. Move the second paragraph to the end of the document. Using drag & drop feature.
- iii. Restore the original status of the document.
- iv. Now provide a heading 'Working with Word Processor' in 14 pt. Bold, Italics and in Times New Roman.
- v. Move the second paragraph in the end of the document using cut, paste operations.
- vi. Format the above written paragraphs and give the options as follows:
 - Alignment
 - justified
 - Indent
 - Before text 0.2" After text: 0.2"
 - Spacing
 - First Line by: 0.4"
 - Above paragraph 0.15"
 - Line spacing
 - Below paragraph 0.15"
 - 1.5 Lines
 - (xviii) Set the margins to 1.25".

SOCIAL SCIENCE

- ❖ Make a project on The French Revolution (project file).

SCIENCE

- 1) Conduct interview of at least 5 people regarding the disease they have suffered in the past and make report of it in the booklet form.
- 2) Study uniform accelerated motion and nonuniform accelerated motion with graphical representation?
(project work).



MATHEMATICS

INDEX

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|---|--|
| <p>(1) Mathematics Lab Activities
(2) Art Integrated Project
(3) Assignment sheet
(4) Learn and write:
• Tables
• Squares
• Cubes</p> | <p>(5) The Two-Minute Mind
(Activity for improving concentration)</p> <p>Note : Activity (1) to be done in Practical file.</p> <p>Activities: (2), (3), (4) are to be done in A4 size sheet of papers and to be submitted together in a proper file.</p> |
|---|--|

CLASS-IX
MATHEMATICS
LAB
ACTIVITIES

To be done in practical file

- (1) To verify the algebraic identity :
 $(a + b)^2 = a^2 + 2ab + b^2$
- (2) To verify that the angles in the same segment of a circle are equal.
- (3) To verify exterior angle property of a triangle.
- (4) To find the values of abscissae and ordinates of various points given in a cartesian plane.
- (5) To verify that the sum of the angles of a triangle is 180° .



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Art integrated project

- 1. Project - Constructing square root spiral.**
- 2. Create a beautiful spiral depicting $\sqrt{2}$, $\sqrt{3}$, $\sqrt{4}$, $\sqrt{5}$, $\sqrt{6}$, $\sqrt{7}$, $\sqrt{8}$**
- 3. Decorate its cover page using the beautiful arts of Bihar, for example, Manjusha, Tikuli and Madhubani.**

ASSIGNMENT SHEET

**Short answer type questions-I**

- Q 1. Express the following numbers in the form of $\frac{p}{q}$.
- a) $0.3\bar{2}$ b) $0.12\bar{3}$ c) $0.003\bar{5}\bar{2}$
- Q 2. Find the three rational numbers between - 2 and 5.
- Q 3. Express the following numbers in the form of $\frac{p}{q}$.
- a) $4.3\bar{2}$ b) $15.7\bar{1}\bar{2}$
- Q 4. Evaluate each of the following:
- a) $\left(\frac{2}{11}\right)^4 \times \left(\frac{11}{3}\right)^2 \times \left(\frac{3}{2}\right)^3$ b) $\left(\frac{1}{2}\right)^5 \times \left(\frac{-2}{3}\right)^4 \times \left(\frac{3}{5}\right)^{-1}$

Short answer type questions-II

- Q 5. Find the value of x , if $5^{(x-3)} \times 3^{(2x-8)} = 225$.
- Q 6. Assuming that x is a positive real number and a, b, c are rational numbers, show that:
- a) $\left(\frac{x^b}{x^c}\right)^a \left(\frac{x^c}{x^a}\right)^b \left(\frac{x^a}{x^b}\right)^c = 1$ b) $\left(\frac{x^a}{x^b}\right)^{a+b} \left(\frac{x^b}{x^c}\right)^{b+c} \left(\frac{x^c}{x^a}\right)^{c+a} = 1$
- Q 7. Find the value of $\frac{32^{0.2} + 81^{0.25}}{256^{0.5} - 121^{0.5}}$

**Long answer type questions**

Q 8. If $\frac{9^m \times 3^2 \times 3^m - 27^n}{3^{3m} \times 2^3} = \frac{1}{27}$, prove that $m - n = 1$.

Q 9. If both a and b are rational numbers, find the values of a and b in each of the following equalities:

a) $\frac{\sqrt{3}-1}{\sqrt{3}+1} = a + b\sqrt{3}$ b) $\frac{\sqrt{2}+\sqrt{3}}{3\sqrt{2}-2\sqrt{3}} = a - b\sqrt{6}$

Q 10. Simplify the following : $\frac{\sqrt{5}-2}{\sqrt{5}+2} - \frac{\sqrt{5}+2}{\sqrt{5}-2}$

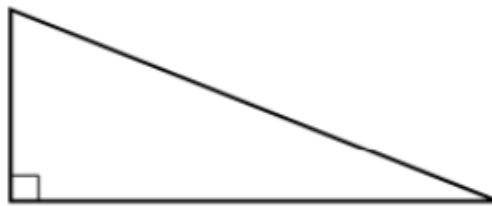
Q 11. If $x = 2 + \sqrt{3}$, find the value of (i) $x - \frac{1}{x}$ (ii) $x^2 + \frac{1}{x^2}$

Q 12. Find value of 'a' and 'b' if, $\frac{7+3\sqrt{5}}{3+\sqrt{5}} - \frac{7-3\sqrt{5}}{3-\sqrt{5}} = a + \sqrt{5} b$

Q 13. Solve : $\sqrt[4]{81} - 8 \sqrt[3]{216} + 15 \sqrt[5]{32} + \sqrt{225}$

Case Study Question

Q 14. Aarushi and Avni are playing with match-sticks by making different geometrical and other figures. Avni kept one match-stick horizontally and then two match-sticks vertically as shown in figure and then asks Aarushi to join the open ends of horizontally and vertically placed strings by a thread. Avni's elder sister Mira comes and ask them to find the length of the thread if each match-stick is of unit length.



Aarushi replies that the length of the thread can be found by using Pythagoras theorem and it is equal to $\sqrt{1^2 + 2^2} = \sqrt{4 + 1} = \sqrt{5}$ units.

Using your knowledge about numbers, answer the following questions:

- $\sqrt{5}$ is an number.
- The decimal representation of an irrational number is
- The decimal representation of a rational number cannot be
- The sum of any two irrational numbers is.....



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The Two-Minute Mind

**(Activity for improving concentration:
Practise it daily)**

The Two-Minute Mind

Sit in front of a clock or a watch that has a sweep second hand.

Relax for a few moments, collect your attention, and when you're ready, place your attention on the motion of the second hand.

*For two minutes,
focus your awareness
on the movement of the second hand as if nothing else in the universe existed.*

If you lose the thread of concentration by thinking about something else, or just by spacing out,

*stop,
collect your attention, and start again.*

Try to keep your concentration for two solid minutes.

Start now.

Learn and write:

- 1. Tables upto 25.**
- 2. Squares of first 30 natural numbers.**
- 3. Cubes of first 20 natural numbers.**



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Let all your worries & stress
go away this summer & enjoy
every minute of it. Have a great

Summer Vacation.



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