MATHS

GENERAL INSTRUCTIONS:
(i)   Do the PRACTISE WORK in a thin notebook.
(ii)   Do the activities in a practical file. (one page blank)
(iii)   The model has to be prepared by all students compulsorily.

TIME OF SELF ASSESSMENTCH 1- REAL NUMBERS

Q1. The LCM of two numbers is 14 times their HCF. The sum of LCM and HCF is 600. If one number is 280, then find the other number.

Q2. Prove that $7 + 3\sqrt{5}$ is irrational, given $\sqrt{5}$ is irrational.

Q3. In a school, the duration of a period in junior section is 40 minutes and in senior section is 1 hour: If the first bell for each section ring at 9:00 a.m., when will the two bells ring together again?

Q4 Find two irrational numbers lying between $\sqrt{2}$ and $\sqrt{3}$.

Q5. The set of Mathematics, Physics and Physical Education books have to be stacked in such a way that all the books are stored topic wise. The number of Mathematics, Physics and Physical Education books are 14, 18 and 22. Determine the number of stacks of each books provided books are of the same thickness.

Q6. Given that $\sqrt{2}$ is irrational, prove that $(5 + 3\sqrt{2})$ is an irrational number.

Q7. Write the smallest number which is divisible by both 360 and 657.

CASE STUDY 1. To enhance the reading skills of grade X students, the school nominates you and two of your friends to set up a class library. There are two sections- section A and section B of grade X. There are 32 students in section A and 36 students in section B?

1.What is the minimum number of books you will acquire for the class library, so that they can be distributed equally among students of Section A or Section B?

2. If the product of two positive integers is equal to the product of their HCF and LCM is true then, What is the HCF (32 , 36) ?

CH 2- POLYNOMIALS

Q1.If the polynomial p(x) is divisible by (x – 4) and 2 is a zero of p(x), then write the corresponding polynomial.

Q2. Find the zeroes of the $x^2 -8x + 15$ and verify the cofficients and zeroes.

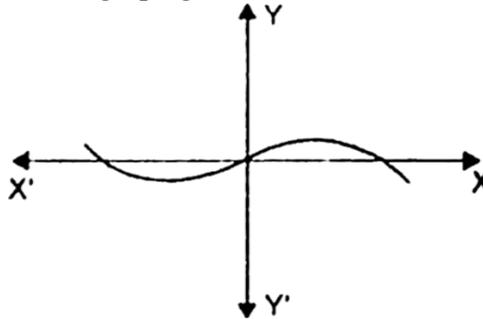Q3.Find the quadratic polynomial whose zeroes are 1 and – 3. Verify the relation between the coefficients and the zeroes of the polynomial.

Q4. Find the value of "p" from the polynomial $x^2 + 3x + p$, if one of the zeroes of the polynomial is 2.

CASE STUDY 2: Basketball and soccer are played with a spherical ball. Even though an athlete dribbles the ball in both sports, a basketball player uses his hands and a soccer player uses his feet. Usually, soccer is played outdoors on a large field and basketball is played indoor on a court made out of wood. The projectile (path traced) of soccer ball and basketball are in the form of parabola representing quadratic polynomial.

1   What is the shape of the path traced shown in the picture?
2   Find the number of zeroes of p(x) in the graph given below:

LOGICALREASONING QUESTIONS

1.In the following number series a wrong number is given. Find out the wrong number.

150, 450, 750, 1060, 1350, 1650, 1950

2. Today it is Thursday.After 132 days,it will be_____

3.In a row of trees, a tree is 7th from left end and 14th from right end. How many trees are there in the row ?

LEARNING BY DOING!!!

1. Prepare a working model on any topic related to your syllabus. The best models will be kept in Maths Lab.
2. Activity – (do be done in practical file -interleaf ones):
    Check the consistency of any two pair of linear equations graphically. Give your introspection relating all concepts of CH-3

SCIENCE

1 **ANSWER THE FOLLOWING QUESTIONS(in a thin copy)**

Q1 . What is meant by

(i) precipitation reaction,

(ii) exothermic reaction,

(iii) oxidation reaction?

Write balanced chemical equations for an example of each.

Q2 (a) Define a balanced chemical equation. Why should an equation be balanced?

(b) Write the balanced chemical equation for the following reaction:

(i) Phosphorus burns in presence of chlorine to form phosphorus penta chloride.

(ii) Burning of natural gas.

(iii) The process of respiration.

Q3 (a) Why is respiration considered as an exothermic reaction?

(b) Define the terms oxidation and reduction.

(c) Identify the substance that is oxidized and reduced in the following reaction.

$3MnO_2 + 4Al\text{————} > 3Mn + 2Al_2O_3$

Q4 Mirror formula is the relation between object distance(u),image distance(v) and focal length (f) of the spherical mirror.It can be written as $1/u+1/v=1/f=2/R$ where R is the radius of curvature of the mirror.this formula is valid for all situations for all spherical mirrors for all positions of object.

Consider a situation where a mirror forms a real image of height 4cm of an object of height 1cm placed at a distance of 20cm away from mirror.

(i)The distance from the object to its image is

(a) 20cm   (b) 80cm   (c) 60cm   (d) 70cm.

(ii)The focal length of mirror is

(a)   -16cm   (b) 12cm   (c)-15cm   (d) 10cm.

(iii) The radius of curvature of the mirror is

(a)   -16cm   (b) -14cm   (c) -30cm   (d) -32cm.

(iv)The magnification of the image is

(a)   3   (b) -6cm   (c) -4cm   (d) 8cm

Q5 Indicate the flow of energy in an ecosystem. Why is it unidirectional? Justify.

Q6 What help can we offer to reduce the problem of waste disposal? Give any two methods.

Q7 Differentiate between biodegradable and non-biodegradable substances. Cite examples.

Q8 In the following food chain, plants provide 500 J of energy to rats. How much energy will be available to hawks from snakes?

Plants → Rats → Snakes → Hawks

Q9 What is meant by the term 'biomass'?

Q10 (a) What is an ecosystem?

(b) name two natural ecosystems.

(c) We do not need clean ponds or lakes, but an aquarium needs to be cleaned regularly. Why it is so?

Q11 One student uses a lens of focal length +50 cm and another −50 cm. State the nature and find the power of each lens. Which of the two lenses will always give a virtual and diminished image irrespective of the position of the object?

Q12 A student wants to project the image of a candle flame on the walls of school laboratory by using a lens:

(a) Which type of lens should he use and why? (b) At what distance in terms of focal length 'F' of the lens

should he place the candle flame so as to get (i) a magnified, and (ii) a diminished image respectively on the wall? (c) Draw a ray diagram to show the formation of the image in each case?

Q13 An object 4.0cm in size, is placed 25.0cm in front of a concave mirror of focal length 15.0cm.

(a) At what distance from the mirror should a screen be placed in order to obtain a screen in order to obtain a sharp image?

(b) Find the size of the image

(c) Draw a ray diagram to show the formation of image in this case.

Q14 Explain the statement : Bile does not contain any enzyme but it is essential for digestion.

Q15 List the three events that occur during the process of photosynthesis. Explain the role of stomata in this process.

 Complete the following practical: (in practical file)
a) Performing and observing the following reactions and classifying them into: Combination reaction, Decomposition reaction , Displacement reaction or Double displacement reaction
(i) Action of water on quicklime
(ii) Action of heat on ferrous sulphate crystals
(iii) Iron nails kept in copper sulphate solution
(iv) Reaction between sodium sulphate and barium chloride solutions
 b)Preparing a temporary mount of a leaf peel to show stomata.
 c) Experimentally show that carbon dioxide is given out during respiration.
d) Determination of the focal length of:
i) Concave mirror
ii) Convex lens
by obtaining the image of a distant object.
e) Tracing the path of a ray of light passing through a rectangular glass slab for different angles of incidence. Measure the angle of incidence, angle of refraction, angle of emergence and interpret the result.
ART INTEGRATED PROJECT
Make a file of A4 sheets in which compare (take help of pictures and tables)
-flora of Karnataka and Uttarakhand
-fauna of Karnataka and Uttarakhand
-minerals of Karnataka and Uttarakhand
-chipko andolan of Uttarakhand and Appiko Andolan of Karnataka
MODEL
Make model of a life process with labeling its parts.

ENGLISH

1) Art Integrated project - Uttarakhand & Karnataka
   Students have to make PPT on Comparative study of cuisines, costumes, historical places, music, art, festivals, of Uttarakhand and Karnataka .PPT must include 10 – 15 slides with audio description. one group will include 5 students. Check your groups given below
   GROUP A – ROLL NOS 1 TO 5
   GROUP B – ROLL NOS 6 TO 10
   GROUP C – ROLL NOS 11 TO 15
   GROUP D – ROLL NOS 16 TO 20
   GROUP E - ROLL NOS 21 TO 25
   GROUP F – ROLL NOS 26 TO 30
   GROUP G – ROLL NOS 31 TO 35
   GROUP H – ROLL NOS 36 TO 40
   GROUP I – ROLL NOS 41 TO 45
   GROUP J – ROLL NOS 46 TO 50

2) Writing 2 news headlines everyday

3) 10 Poetic Literary devices with examples

4) Write 10 sets of dialogues, each set consisting of 6 dialogues. Convert the same dialogue into indirect form

HINDI

1. **"हरिहर काका "** पाठ के आधार पर कल्पना कीजिए कि यदि 'हरिहर काका' की जगह आप होते तो आप क्या करते? कहानी को एक नया मोड़ और शीर्षक प्रदान कर ' हरिहर काका' कहानी को पुन:लिखिए।

2. मीराबाईके**'पद अथवा उनकी चारित्रिक विशेषताओं'** को प्रदर्शित करता हुआ एक सूचनाप्रद पोस्टर या विज्ञापन तैयार कीजिए।

3. ग्रीष्मावकाश के दौरान बिताए अपने पाँच दिन के अनुभव को ' डायरी' के रूप में लिखिए।

4. निम्नलिखित पंक्तियों में से किसी एक पंक्ति को आधार बनाकर स्वरचित कविता लिखिए-
   - मेरे बड़े भाई साहब बहुत निराले हैं....
   - कुछ दिनों के लिए सब कुछ थम जाता है......
   - सपनों की उड़ान बड़ी तेज होती है....
   - यह धरती जाँबाज़ों की जननी है, जहाँ की हर बाला दुखहरनी है...

5. कक्षा में करवाया गया समस्त कार्य पूर्ण कीजिए और नियतकालिक परीक्षा हेतु तैयारी कीजिए।

नोट – बिंदु 1,2,3 और4 को फुलस्केप आकार के पृष्ठ (A4 Sheet) में बनाएं और एक फाइल में संग्रहित कर जमा करवाएँ।

SOCIAL SCIENCE

1 Make a project on **Consumer Rights.(Make a well presented file)**

Key Points

❖ Understanding Consumer Rights.

❖ Legal framework like **COPRA (** Consumer Protection Act, 1986)

❖ Raising awareness among consumers.

2   Make 20 questions of 2 marks and write their answers each fromall the completed chapters in a thin notebook.

ARTIFICIAL INTEELIGENCE

1. PROJECT:

TOPIC- CHATBOT: Develop a simple chatbot that responds to user queries.

OR

IMAGE CLASSIFICATION: Train a model to classify images to different categories.

Instructions-Prepare a report on your project. It should be of4-5 A4 pages and consists of all relevant information along with the supported pictures. Mention School Name, Your Name, Class and Topic on first page of your project and place it in a Stick file.

2. Write the following Python Programs:

Instructions-Write all the given python programs in AI Practical File. Program output to be written with Pencil only. Practical file should be completely covered and presentable.

1. Write a Program to input Four numbers and find their sum and product.
2. Write a Program to calculate S.I. by inputting the value of Principal Amount, rate from the user and time period of 3 years.
3. Write a Program to accept Marks in 5 Subjects and calculate their average marks also.
4. Write a Program to Input a number and print its Square &Cube.
5. Write a Program to Input the age of a person and check whether a person is eligible to caste the vote or not.
6. Write a Program to Input a number and check whether a number is palindrome or not. PALINDROME means the number= reverse of the number 313=313
7. Write a Program to Input a number and check whether the followings are Leap yeas or not. (YEARS- 2020, 2021, 2033, 2037, 2041)
8. Write a Program to check whether the number input by the user is Armstrong Number or not.
9. Write a Program to take the temperature of all 7 days of the week and display the average temperature of that week.
10. Write a Program to generate the following pattern.

   1 1 1 1 1

   2 2 2 2

   3 3 3

   4 4

   5

INFORMATION TECHNOLOGY

Do the following questions in a Practical File. Write the steps on the right-side page and paste the coloured printout of the output on the left page. Use *Libreoffice Writer***.**

TASK 1: Type an article on "Self-Management Skills".
- Create sub-headings like Time Management, Stress Handling, Self-awareness.
- Use Fill Format mode to apply styles to all headings in the document.

TASK 2: Create a new style using <u>drag and drop method</u> and <u>New Style from Selection method</u>.Showcase it practically. Name the two stylesafter your own name.*(As Rahulstyle_1 and Rahulstyle_2)*

TASK 3: Design an advertisement/poster for "Smart Minds Coaching Classes".
- Use different shapes (rectangle, callouts, arrows) to create layout.
- Add images such as books, students, or classroom icons.
- Include details like courses offered, timings, and contact info.

TASK 4: Prepare a professional Resume Template using LibreOffice Writer. Include sections like Personal Details, Career Objective, Education, Skills, Experience.

TASK 5: Make a Table of Content for your IT Book.