ST. THOMAS SCHOOL, SAHIBABAD
HOLIDAY HOMEWORK 2024-25
CLASS IX

TOPIC: 'DISASTER MANAGEMENT'

Dear Students,

Please follow the guidelines enlisted below for the project work. At the same time, use your imagination, read, explore, and think 'out of the box' to make your project unique and meaningful.

GENERAL INSTRUCTIONS:

➢ Arrange all subject sheets in a single folder, except social science.
➢ The social science project should be done in a separate folder.
➢ It must have a cover page.
➢ Label the file with your name, class, section, roll number, and title of your project, 'Disaster Management'.
➢ Write "Multi-Disciplinary Project" above the title.
➢ Use colours according to the given colour code.

ENGLISH	HINDI/ SANSKRIT	MATHEMATICS	SCIENCE	SOCIAL STUDIES	COMPUTER
LIGHT BLUE	LIGHT YELLOW	LIGHT PURPLE	LIGHT BROWN	LIGHT GREEN	LIGHT PINK

➢ Pages should be arranged in the given sequence:

S. No.	SUBJECT	PAGE NO.
1.	Index	1
2.	Introduction	2
3.	Acknowledgement	3
4.	Bibliography	The last page of the project.

➢ Arrange your sheets subject-wise after acknowledgement.
➢ Submit your file to the respective class teacher.
➢ **The submission date is till 10th July.**
➢ Revise the PT-1 syllabus for all subjects.

ENGLISH

Creative Monologue: Prepare a creative monologue (a long speech by an actor in a play or film) on the given topics:

Roll no. 1–5: Cloud Burst

Roll No. 6–10: Avalanche

Roll No. 11–15: Floods

Roll No. 16-20: Forest Fires

Roll No. 21-25: Earthquake

Roll No. 26-30: Tsunami

Roll No. 30-35: Cyclones

Take these natural disasters as actors on stage, write the monologue, and present yourself as them.

HINDI

पाठ "इस जल प्रलय में" के आधार पर किसी प्राकृतिक आपदा की भीषणता का वर्णन करते हुए उससे निपटने के उपायों का अपने शब्दों में वर्णन करें |

SANSKRIT

'नीतिशतक ' से चार श्लोक अर्थ सहित अपनी आकर्षक लिखावट में लिखें |

MATHEMATICS

**I**   **Solve the following questions in a separate notebook:**

1. Find three rational numbers lying between $\frac{1}{3}$ and $\frac{1}{2}$.

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

3. If one angle is equal to three times its supplement, then find the measure of angles.

4. Express $0.12\overline{34}$ in the form $\frac{p}{q}$, where p and q are integers and q ≠0

5. Simplify: $\dfrac{(25)^{\frac{3}{2}} \times (343)^{\frac{3}{5}}}{(16)^{\frac{5}{4}} \times (8)^{\frac{4}{3}} \times 7^{\frac{3}{5}}}$

6. Find the value of a, If $\left(\frac{y}{x}\right)^{2n-8} = \left(\frac{x}{y}\right)^{a-1}$

7. Find the zero of the polynomial p(y) = 2y + 7

8. Prove that $(a + b + c)^3 - a^3 - b^3 - c^3 = 3 (a + b) (b + c) (c + a)$

9. If a + b + c = 9 and ab + bc + ca = 26, find $a^2 + b^2 + c^2$

10. Two lines AB and CD intersect at O. OE is a ray such that ∠BOE = 80°. If ∠BOD = 30°, find ∠EOC.

11. If x − 3 and x − $\frac{1}{3}$ are both factors of $ax^2 + 5x + b$, show that a = b

12. Factorize $3\sqrt{3}x^3$ - $5\sqrt{3}y^3$

13. Without actually calculating cubing find the value of $(9)^3 + (-3)^3 - (6)^3$

14. If $x - \frac{1}{x} = 2$, find the value of $4x^2 + \frac{4}{x^2}$

15. Find the value of a and b if a +b$\sqrt{15}$ = $\frac{\sqrt{5}+\sqrt{3}}{\sqrt{5}-\sqrt{3}}$

16. Simplify: $\dfrac{7\sqrt{3}}{\sqrt{10}+\sqrt{3}}$ - $\dfrac{2\sqrt{5}}{\sqrt{6}+\sqrt{5}}$ - $\dfrac{3\sqrt{2}}{\sqrt{15}+3\sqrt{2}}$

17. Represent $\sqrt{17}$ on number line.

18. In the figure, if PQ ‖ RS and ∠PXM = 50 ° and ∠MYS = 120 °, find the value of x.
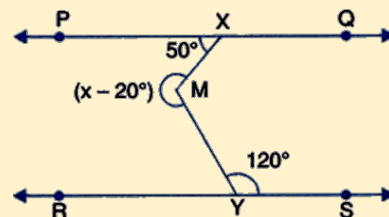
19. If a transversal intersects two lines such that the bisectors of a pair of corresponding angles are parallel, then prove that two lines are parallel.

20. In the given figure AB ∥ CD. If ∠AOC = 30 ° and ∠OAB = 100 °, then find ∠OCD.
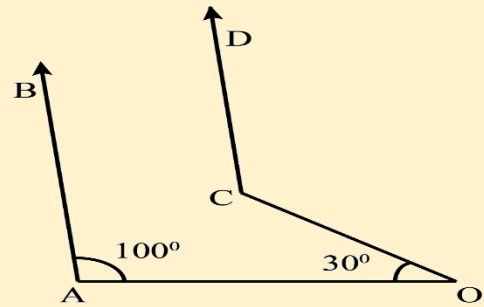
21. Assertion: In figure, if OP stands on line QR such that ∠POR : ∠POQ = 4 : 5 then ∠POR = 80 °.
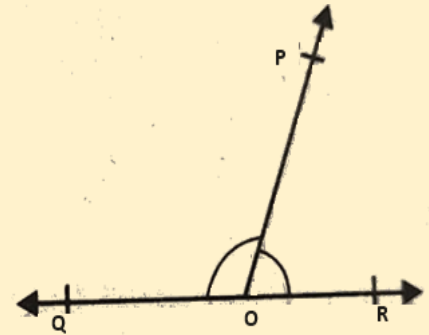
Reason: When sum of two adjacent angle is 90 °, they form a linear pair.

  a. Both assertion and reason are correct, and reason is the correct explanation for assertion.
  b. Both assertion and reason are correct, and reason is not the correct explanation for assertion.

  c. The assertion is true, but the reason is false.

  d. Both assertions and reasons are false.

22. Assertion: A polynomial may have more than one zero.

    Reason: The number of zeros in the polynomial is equal to the degree of the polynomial.
  a. Both assertion and reason are correct, and reason is the correct explanation for assertion.

  b. Both Assertion and Reason are correct and Reason is not the correct explanation for Assertion.

  c. Assertion is true but the reason is false.

  d. Both assertion and reason are false.

23. Assertion: 0.271 is a terminating decimal and we can express this number as $\frac{271}{1000}$ which is of the form $\frac{p}{q}$, where p and q are integers and q ≠0.

    Reason: A terminating and non-terminating decimal expansion can be expressed as rational number.

  a. Both Assertion and Reason are correct and Reason is the correct explanation for Assertion.

  b. Both Assertion and Reason are correct and Reason is not the correct explanation for Assertion.

  c. Assertion is true but the reason is false.
  d. Both assertion and reason are false.

24. Aprajita is a wall art designer. She designed 3m × 2m wall panel having embossed square tiles. The bigger square tile has area 5100 sq. cm and the smaller square has 17 sq. cm.
Refer the details of the wall panel and answer the associated questions ignoring the units of the dimensions.

a. Find whether the length of the side of bigger square in rational or irrational.

b. Find the sum of sides of bigger square and smaller square in simplified form.
    OR
    Aprajita divides a bigger square tile into smaller square tiles. Is she able to find exact number of smaller square tiles such that there is no wastage?

c. Write the rationalizing factor of $\frac{1}{10\sqrt{51}+\sqrt{17}}$

25. Sushmit is a delivery boy. He rides scooty on all working days. The distance covered on scooty is given by the polynomial expression p(x) = $x^2 + 3x - 10$.Assuming that he rides at the uniform speed and takes the time given by g(x) = x – 2 , x >2.
    Use the information stated above and answer the following questions given below:

a. What is the speed of the scooty?

b. Find the sum of the degrees of the polynomial p(x) and g(x).

c. If p(x) is replaced by r(x) = $5x^2 - kx - 18$ and g(x) is a factor of r(x), then what will be the value of k?
    OR
    If p(x) is replaced by $4x^2 + 4x - 3$, then what are the possible expressions for time and speed?

II In whatever form, disasters disrupt communities and can take a serious toll on people, property, economies, and the environment. They often stretch a community's capacity to cope.
    Disaster management is the process of effectively preparing for and responding to disasters. It involves strategically organizing resources to lessen the harm that disasters cause. It also involves a systematic approach to managing the responsibilities of disaster prevention, preparedness, response, and recovery.
    Make a project showing how mathematical modelling helps to prevent natural disasters.
    Instructions: (i) Do the project on A4-sized sheets (to be kept in a folder).
    (ii) Use the concepts of bar graphs, pie charts, and algebraic expression to show data.

SCIENCE :

Prepare a project file (hard copy) on Natural   Disasters. Write
- The science behind it?
- How and where do they occur?
- Mention its after-effects.

The class is divided into four groups:

GROUP NO.	ROLL NO.	TOPIC
Group 1	1 to 9	Cloud burst
Group 2	10 to 18	Cyclone
Group 3	19 to 27	Earthquake
Group 4	28 to 36	Tsunami

SOCIAL SCIENCE

Prepare a separate project file (hard copy) on Disaster management
Write:
(a) What is it?
(b) Where and how does it occur?
(c) Safety measures and immediate action to be taken.

The class is divided into four groups:

GROUP NO.	ROLL NO.	TOPIC
Group 1	1 to 9	Avalanche

Group 2	10 to 18	Cloud bursts
Group 3	19 to 27	Floods
Group 4	28 till end	Forest Fire

INFORMATION TECHNOLOGY

For each Practical -
Left Side [plain page]- Paste the printout of the practical.
Right Side- (i) Title
        (ii) Software- Features
        (iii) Stepwise explanation of the project.

PRACTICAL 1:
Prepare a report on seismic activity in the past year in MS Word/Libre Office, you are asked to include a table listing notable earthquakes that occurred globally. This table will provide a summary of key earthquake events, including their magnitudes, locations, and impacts.
Insert a table that includes the following columns:
1. Date: This column should indicate the date when each earthquake occurred.
2. Magnitude: Provide the magnitude of each earthquake on the Richter scale or another appropriate scale.
3. Location: Specify the geographical location (country/region) where each earthquake occurred.
4. Impacts Briefly describe the impacts or consequences of each earthquake, such as damage to infrastructure, casualties, or other notable effects.

PRACTICAL 2:
Prepare a report on a recent flood that has impacted your community. Your report will be presented to local authorities and community members to inform them about the flood's causes, impacts and response efforts in MS– Word / Libre Office Writer.

PRACTICAL 3 :
Implementing Mail Merge
You are working as an administrative assistant at a local charity organization, and you need to send out personalized donation acknowledgement letters to the organization's donors for the flood victims. The organization has provided you with a dataset containing the following information for each donor:
- Donor Name
- Donation Amount
- Donation Date
- Donor Email Address

Your task is to create a personalized donation acknowledgement letter template and use mail merge to generate individual letters for each donor. The letter should address the donor by name, thank them for their donation, and include the specific donation amount and date.
1. Design the letter.
2. Take a printout of the letter with the insert merge field.
3. Paste the printout on the left side of the practical file and briefly explain the steps of mail merge.

PHYSICAL EDUCATION

1. Prepare a project file on any one of the following sports:
a) Volleyball
b) Badminton
Note: - Write down all the rules & regulations.
         Draw the diagram of the ground with proper measurement.

ART EDUCATION

1. Make a beautiful landscape on an A2 size ivory sheet using watercolour/acrylic colours.

2. Make a beautiful paper bag using a full-size handmade sheet and decorate it.