SUBJECT: MATHEMATICS

1. Find which of the variables x, y, z and u represent rational numbers and irrational numbers.

   a) $u^2 = \frac{17}{4}$ b) $x^2 = 5$ c) $z^2 = 0.04$ d) $y^2 = 9$

2. Simplify $0.\overline{134} - 0.00\overline{32}$ and express the result in the form $\frac{p}{q}$ where p, q are integers and q $\neq$ 0

3. Simplify $12\sqrt{18} - 6\sqrt{20} - 3\sqrt{50} + 8\sqrt{45}$

4. Evaluate $\frac{\sqrt{5}+\sqrt{3}}{\sqrt{80}+\sqrt{48}-\sqrt{27}-\sqrt{45}}$

5. If $x = \frac{5-\sqrt{21}}{2}$ then prove that $\left(x^3 + \frac{1}{x^3}\right) - 5(x^2 + \frac{1}{x^2}) + (x + \frac{1}{x}) = 0$.

6. Simplify $\left\{5(16^{\frac{1}{4}} + 27^{\frac{1}{3}})\right\}^{\frac{1}{4}}$.

7. Find the zero of the polynomial $2x^2 + 7x - 4$.

8. For what value of m is $x^3 - 2mx^2 + 16$ is divisible by x + 2.

9. If ab + bc + ca = 0, find the value of $\frac{1}{a^2-bc} + \frac{1}{b^2-ca} + \frac{1}{c^2-ab}$.

10. Find the value of $x^3 - 27y^3 - 343 - 63xy$ when x = 3y + 7.

11. Without actual division, prove that $2x^4 - 5x^3 + 2x^2 - x + 2$ is divisible by $x^2 - 3x + 2$.

12. Find the value of a and b so that x+1 and x-1 are factors of $x^4 + ax^3 + 2x^2 - 3x + b$.

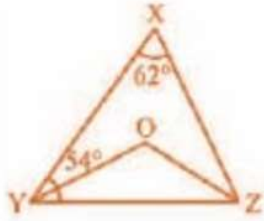13. If a < 0 and b < 0, then in which quadrant the point A(a, b) lies ?

14. Find the value of x and y if (2, 2y-3) = (x,7).

15. Check whether the equation $x(x + 4) - x^2 + 3y + 5 = 0$ is a linear equation in two variables.

16. If (2,0) is a solution of the linear equation 2x + 3y = k, then find the value of k.

17. A two digit number is 4 more than 6 times the sum of its digits . Write a linear equation in two variables to represent this statement .

18. In the figure ∠ X = 62°, ∠ XYZ = 54°, If YO and ZO are the bisectors of ∠ XYZ and ∠ XZY respectively of ΔXYZ. Find ∠ OZY and ∠ YOZ

19. If the difference between two complementary angles is 10°. Find the angles.

20. How many degrees are there in an angle which equals one-fifth of its supplement.

NOTE : Students are advised to write the solutions of above problems on A4 Size sheets, arrange them orderly, keep these sheets in a folder and submit. Front page should be well decorated and it should depict your name, grade and section. Kindly submit on 3rd September 2024.

GRADE IX SCIENCE HOLIDAY H.W (2024-25)

SECTION – A (PHYSICS)

(Answer the PHYSICS questions on a separate A4 sheet)

I. Multiple Choice Questions :

1.

The numerical ratio of displacement to distance for a moving object is
(a) always less than 1
(b) always equal to 1
(c) always more than 1
(d) equal or less than 1

2. The distance time graph of a body coincides with its time axis. The body must be
   (a) in uniform motion
   (b) at rest
   (c) in uniformly accelerated motion
   (d) in zig-zag motion

3. From the given $v - t$ graph (see below Fig.), it can be inferred that the object is
   (a) in uniform motion
   (b) at rest
   (c) in non-uniform motion
   (d) moving with uniform acceleration

4. The velocity time graph of a body is parallel to the time axis. The body is
   (a) at rest
   (b) having uniform acceleration
   (c) having zero acceleration
   (d) having non-uniform acceleration

5. A particle is moving in a circular path of radius r. The displacement after half a circle would be:
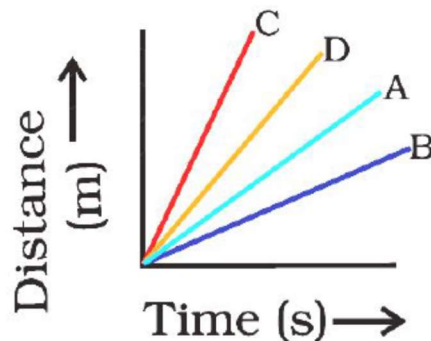   (a) Zero
   (b) πr
   (c) $2 r$
   (d) $2\pi r$

6.

Suppose a boy is enjoying a ride on a *merry-go-round* which is moving with a constant speed of 10 m/s. It implies that the boy is
(a) at rest
(b) moving with no acceleration
(c) in accelerated motion
(d) moving with uniform velocity

7.

Four cars A, B, C and D are moving on a levelled road. Their distance versus time graphs are shown in below Fig.. Choose the correct statement
(a) Car A is faster than car D.
(b) Car B is the slowest.
(c) Car D is faster than car C.
(d) Car C is the slowest.

8.

Which of the following statement is *not* correct for an object moving along a straight path in an accelerated motion?
(a) Its speed keeps changing
(b) Its velocity always changes
(c) It always goes away from the earth
(d) A force is always acting on it

9.

The inertia of an object tends to cause the object
(a) to increase its speed
(b) to decrease its speed
(c) to resist any change in its state of motion
(d) to decelerate due to friction

10.

Inertia of a body in linear motion is measured by its
(a) mass
(b) momentum
(c) velocity
(d) none of the above

II. Answer the following :

1.

Plot the following graphs:

   (a) distance –time graph for an object with uniform speed

   (b) distance –time graph for an object with non- uniform speed

   (c) velocity –time graph for uniform motion of a car

   (d) Velocity –time graph for a car moving with uniform accelerations.

   (e) Velocity –time graph for a car moving with non- uniform accelerations.

   (f) A body at rest

2.

A car travels a certain distance with a speed of 50 km/h & returns with a speed of 40 km/h. Calculate (i) the average speed & (ii) average velocity of car for the whole journey.

3.

A car is traveling with a speed of 36km/h. the driver applies the brakes and retards the car uniformly. The car is stopped in 5s. Find (i) the retardation of the car (ii) distance traveled before it is stopped after applying the brakes.

4.

A child drops a ball from a height of 10m. Assume that its velocity increases uniformly at the rate of $10m/s^2$. Find (i) the velocity with which the ball strikes the ground (ii) the time taken by the ball to reach the ground.

5.

A boy leaves his house at 9:30 am for his school. The school is 2 km away and classes start at 10:00 am. If he walks at a speed of 3km/h for the first km, at what speed should he walk the second km to reach just in time?

6.

When force acting on a body has an equal and opposite reaction, then why should the body move

7.

What can you say about the speed of a moving object if no force is acting on to it.?

8. Give reasons :

a) Seat belts are provided in the cars to prevent accidents.

b) A small mass, such as a bullet may kill a person when fired from a gun.

c) A Karate player breaks a slab of ice with a single blow.

9.

An iron sphere of 1kg is moving a velocity of 20m/s on a cemented floor. It comes to rest after traveling a distance of 50 m. Find the force of friction between the sphere and the floor.

10.

A ball of mass 100g moving with a velocity of 0m/s is stopped by a boy in 0.2s. Calculate the force applied by the boy to stop the ball.

SUBJECT:CHEMISTRY

Activity 1: Prepare a model to demonstrate movement of particles in solids, liquids and gases. (See the page No. 13 of Science Text book).

Activity 2: Take an earthen pot (mutka), some pebbles and sand. Design a small- scale filtration plant that you could use to clean muddy water.

SUBJECT:BIOLOGY

1. Define the term "tissue",

2. How many types of elements together make up the xylem tissue? Name them.

3. How are simple tissues different from complex tissues in. plants?

4. What are the functions of the stomata

5. Differentiate between parenchyma, collenchyma and

sclerenchyma.

6.Draw a well labelled diagram of various types of meristematic tissue and explain their functions

7.How will you differntiate between plant growth and animal growth.

8.Draw a prokaryotic cell and label it.

9.Mention the structure and functions of mitochondria and endoplasmic reticulum.

10. Write all the activities mentioned in chapter Cell and Tissue.

(Date of Submission of H.H.W : 8th September 2024)

SUBJECT: SOCIAL SCIENCE

SUBJECT: DISASTER MANAGEMENT
TOPIC: EARTHQUAKE

Objectives:
1. The overall objective of the project work is to help students gain an insight and pragmatic understanding of the theme and see all the Social Science disciplines from interdisciplinary perspective. It should also help in enhancing the Life Skills of the students.
2. Students are expected to apply the Social Science concepts that they have learnt over the years in order to prepare the project report.
3. If required, students may go out for collecting data and use different primary and secondary resources to prepare the project. If possible, various forms of art may be integrated in the project work.

Topics to be covered under the project:

➢ What is an Earthquake?
➢ What Causes an Earthquake?
➢ What to do During an Earthquake?
  Before the disaster
  Do's and Don'ts
  After the disaster
➢ What are the Effects of an Earthquake?

- What is the difference between seismograph and Richter scale?
- Protection against Earthquake.
- What is an earthquake zone?
- What are earthquake zones in India?

INDIVIDUAL FORMAL HANDWRITTEN REPORT
INSTRUCTIONS AND GUIDELINES TO ON HOW TO WRITE THE PROJECT:

- The other side of the paper i.e. the left side should be used for pasting pictures, newspaper cuttings etc.
- However, lines to write/pictures/watermarks/borders can be printed.
- Cover page also has to be hand written.
- You can use charts/ colored sheets/ any other paper.
- Cover page showing project title, student information, school and year.
- List of Content or Index
- Acknowledgement Preface – (In this section you may thank the people who have helped you in writing the report)
- Introduction – The Introduction should present the aim of the project and the background of investigation. It should explain why the project is important and interesting.
- Topics with suitable heading
- Conclusion – What have you understand about the project, its importance etc.
- Bibliography – This includes references to websites and books / articles consulted while writing the report.
- All photographs and sketches should be labelled and related to the theme.
- Question based on the project report will be asked as Viva test.

<div align="center">

Viva test on: 2/09/2024

</div>

NOTE: Kindly be adhere to the submission date: 2/09/2024

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SUBJECT: ENGLISH

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*Page 1-Cover page, with the title of the project, school details and details of the student.

*Page 2-Certificate of Completion under the guidance of the teacher.

Q1. Read the book, 'Around the World in Eighty Days' and write a brief synopsis of the book, author, plot, characters and your review with a conclusion.

Q2. Make a pictorial project on the life of the poet- Robert Frost depicting the life events, awards and literary works in about 4-5 pages.

Q3. Write a **self-composed poem** describing any 2 states of your choice, in about 12 to 16 lines.

- Mention Rhyming Scheme if any
- Use at least two poetic devices from the choices given (Alliteration, Hyperbole, Metaphor, Simile , Personification)
- Suitable Title
- Specify the poetic devices with reference to the poem

Q3. Write a **descriptive paragraph** describing any one of the famous personalities in India and any one famous place of India.

Q4. Margie witnessed a very different sort of school in the chapter 'THE FUN THEY HAD'. Due to pandemic (COVID-19) you are also experiencing a different type of schooling through Online classes. Compare the three types (as per the chapter, physical classes and online classes) of schooling and **write the comparison** in about 100 words (to be done in Literature notebook/ register).

Q5. From the base form of the verb **form adjectives, adverb,nouns** wherever possible by selecting minimum 30 words from the dictionary.

* SUBJECT ENRICHMENT ACTIVITY (SPEAKING SKILL): Students must prepare on any one of the topics from the following for speaking assessment. (Time limit 1.30s to 2 minutes)

1. Future of English in India
2. Value of Discipline in Your Life
3. Are we Happy?
4. A World free from War
5. India's Relations with the Neighbouring Countries

INSTRUCTIONS :

- The file should be neat legible, with an emphasis on quality of content,accuracy of information, creative expression,proper sequencing and relevance.
- Use coloured A4-size sheet.
- Plagiarism is strictly prohibited.

****

SUBJECT: SECOND LANGUAGES
URDU

۱پرنسپل کے نام چھٹی کی درخواست لکھیے

۲۔'صحت کی اہمیت ' پردو سوالفاظ کامضمون لکھیے

HINDI

प्रश्न1- A4 साइज़पेपरपर'महादेवीवर्मा' हिंदी कीकवयित्री का चित्र एवं संक्षिप्त परिचय दीजिए—

प्रश्न2-तुम कब जाओगे, अतिथि पाठका संदेश अपने शब्दों में लिखिए—

प्रश्न3- मनुष्यकोआपसी प्रेम-सद्भावको बनाएरखनेकेलिएक्या

करनाचाहिए?'रहीमकेदोहे'नामकपाठकेआधारपरउत्तरदीजिए—

प्रश्न 4-विद्युत -कटौती से परेशान दो महिलाओं के मध्य संवाद को(30-40) शब्दों में लिखिए।

प्रश्न 5- 'मज़हब नहीं सिखाता आपस मेंबैर रखना'- विषय पर (80-100) शब्दों में अनुच्छेद लिखिए—

TAMIL

Holiday Homework Tamil

1.விடுதியில் தங்கி படிக்கும் உன் அண்ணன் நலம் விசாரித்து ஒரு கடிதம் எழுதுக

2. பின்வரும் குறிப்புகளை பயன்படுத்தி ஒரு கட்டுரை எழுதுக

முன்னுரை - எரி சக்தியும் நாட்டு வளர்ச்சியும் - மின்சாரம் முதலான எரிசக்திகள் - மரபு சார்ந்தவை- மரபுசாராதவை - இயற்கை ஆற்றலை பயன்படுத்துவோம் _ மாசு குறைப்போம் முடிவுரை -

5:57 pm

MALYALAM

ആശയം വിപുലീകരിച്ചു എഴുതുക

1. "ഐക്യമത്യം മഹാ ബലം "
2. " മനസ്സുണ്ടെങ്കിൽ മാർഗ്ഗവുമുണ്ട് "

ഉപന്യാസം തയ്യാറാക്കുക.

1. ലോകസമാധാനം
2. വൃദ്ധസദനങ്ങൾ

കത്ത് തയ്യാറാക്കുക.

1. മായം ചേർത്ത ഭക്ഷണ സാധനങ്ങളുടെ വില്പന നിരോധിക്കണം എ)ന്നാവശ്യപ്പെട്ടുകൊണ്ട് പൗരസമിതിപ്രസിഡന്റെന്ന നിലയിൽ ആരോഗ്യ മന്ത്രിക്ക് ഒരുകത്ത് തയ്യാറാക്കുക .

2. സ്കൂളിലെ സയൻസ് ക്ലബ്ബ് ഉത്ഘാടനം ചെയ്യുന്നതിലേക്കായി വിദ്യാഭ്യാസവകുപ്പ് മന്ത്രിയെ ക്ഷണിച്ചുകൊണ്ട് ഒരുകത്ത് തയ്യാറാക്കുക .

ARABIC

<div dir="rtl">

1- اكتب موضوعا على إجازة صيفية ما لايقل عن ١٠ جمل.

2- صرف فعل الماضي والفعل المضارع من) هو شكر ، هو يشكر– هو علم ، هو يعلم(

3- اكتب عن قطعة وجيزة عن حياة ساندر بيتساي لا يقل عن 10 جمل.

</div>

1. Write a topic of no less than 10 sentences about summer vacation.

2. Conjugation of the past and the present tense by
   <div dir="rtl">(هوعلم ، هو يعلم – هو شكر ، هو يشكر)</div>

3. Write a short passage about the life of Chandra Pitchai, in no less than 10 sentences.

FRENCH

I- **Prépare ta fiche d'identité.**

Nom :
Prénom :
Date de naissance :
Nationalité :
Domicile :
Téléphone :
Courriel :

II- **Que représente ces abréviations :**

SNCF…………………………………………………………………………………………

 TGV………………………………………………………………………………………...

 PDG …………………………………………………………………………………………

 ONV…………………………………………………………………………………………

OMS...

III- Conjuguez les verbes suivants: au present
1 /Parler

Je	Nous
Tu	Vous
Il	Ils
Elle	Elle

2/ remplir.

Je	Nous
Tu	Vous
Il	Ils
Elle	Elle

IV- Donnez les nationalités:

Pays	Masculin	Féminin
sSénégal		
Canada		
Inde		
France		
Angleterre		
Etas-Unis		

V- Conjuguez au future proche les verbes:
1/ Parler

Je	Nous
Tu	Vous
Il	Ils
Elle	Elle

2/ choisir

Je	Nous
Tu	Vous
Il	Ils
Elle	Elle

3/ entendre

Je	Nous

Tu	Vous
Il	Ils
Elle	Elle

VI-Qu'est-ce qu'on mange :
1/Au petit déjeuner

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2/Au déjeuner

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3/Au gouter

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4/Au diner.

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5-décris ta journée en quelques lignes (10lignes minimum)

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6-Décris ta famille en dix à douze phrases dans ton cahier.

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