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**THE JAIN INTERNATIONAL SCHOOL**

**KANPUR**

**HOLIDAY HOMEWORK**

**CLASS-X**

| **SUBJECTS** | **TOPIC** |
| --- | --- |
| **ENGLISH** | \*\_Arunachal Pradesh is a natural wonderland with wild rivers, impenetrable forests, rare yet pervasive birds and animal species. It is a land hidden in rain and mist, where life and legend intertwine.\_\*  \*Read the book “Arunachal Pradesh: The Hidden Land” to explore the indescribable loveliness of the landscape. Prepare a write up of the innumerous places revealed in the Hidden Land as you read the book.\*  \*Suppose you have to send a brochure in response to a tourist group enquiryabout ‘Areas worth Exploring in Arunachal’ , Design a coloured Brochure of SIX Pages in landscape layout for a nature trip to Arunachal Pradesh.\*  \*\_Create a suitable cover page.\_\*\*Only HAND-WRITTEN projects will be accepted\* (Also write your company cover letter as reply to that Group/individual’s enquiry. Invent necessary details. |
| **HINDI** | 1.अपनी पाठ्य पुस्तक क्षितिज के पढ़ाए गए पाठों में से किसी एक पाठ कापरियोजनाकार्य **/** वर्किंग मॉडल तैयारकीजिए।  **या** व्याकरण से संबंधित किसी एक पाठ पर वर्किंग मॉडल तैयार कीजिए।  2.रचना के आधार पर वाक्यों के (20)भेद उदाहरण सहित स्पष्ट करें व कमेंट शीट में लिखें।  3. 'नेताजी का चश्मा' पाठ पर एक पीपीटी तैयार कीजिए।  4. 'करत करत अभ्यास के जड़मति होत सुजान' इस विषय पर 150- 200 शब्दों में एक अनुच्छेद कमेंट शीट पर लिखें। |
| **MATHS** | **Worksheet is attached with this link. Open it and solve in maths fair notebook.**  [**https://docs.google.com/document/d/1KRPOrvazeKhP-Or2oB1IGQXecstyz-HiCkpQhrGycc4/edit?usp=drivesdk**](https://docs.google.com/document/d/1KRPOrvazeKhP-Or2oB1IGQXecstyz-HiCkpQhrGycc4/edit?usp=drivesdk) |
| **SCIENCE** | **Biology**   1. Make a model/ working model of following as per your roll no. 2. Human digestive system- Roll no. 1-3 3. Human respiratory system- Roll no. 4-6 4. Human lungs - Roll no. 7-9 5. Human heart- Roll no. 10-12 6. Circulatory system in human- Roll no. 13-15 7. Cross section of human kidney- Roll no. 16-17 8. Human excretory system- 18-19   2. Do the given worksheet in your classwork register.  <https://docs.google.com/document/d/14PkhqCGjEFSbIKgFwmjPAtm4RKJO5daa/edit?usp=drivesdk&ouid=116453593750853594452&rtpof=true&sd=true>  3. Make a project file(comment sheets) on "NAMAMI GANGE" add relevant article and attractive pictures for making it presentable.  **PHYSICS-**  Do the given worksheet in your classwork register:  <https://docs.google.com/document/d/1oF1p1xWC-nRO7YTJac75B92TeTMTcvMd/edit?usp=drivesdk&ouid=118420316635596359723&rtpof=true&sd=true>  PROJECT-Make a project on magnetic effect of electric current  OR  Make a project on Atmospheric refraction.  CHEMISTRY - <https://drive.google.com/file/d/1FY4ZViGE2ILmjH62AkEUY67fb0lFhV3K/view?usp=drivesdk> |
| **PAINTING** |  |
| **SOCIAL SCIENCE** | **Make a Project on following topic-**  **Sustainable development/Social Issues/Consumer Awareness**  **Things to be kept in mind: 1) Project must be handwritten 2) Project must include the following in order- a) Introduction of topic b) Acknowledgement Page c) Certificate Page d) Index .**  **Project must be between of 12-15 pages** |
| **IT** | Report file with word processor and spreadsheet activities to be made as per  Assignment sheet given. |



**HOLIDAY HOMEWORK**

CLASS X

SUBJECT – PHYSICS

CHAPTER –REFLECTION, REFRACTION AND ATMOSPHERIC REFRACTION.

### ANSWER THE FOLLOWING QUESTIONS

1. Which property of light does not change on going One medium to another medium
2. Frequency
3. Amplitude
4. Wavelength
5. Speed.

2. Image formed by a concave mirror

1. can be real or virtual

b) can be erect or inverted

c) can be magnified or diminished

d) all of the above

Q3. Students obtained a blurred image of an object on a screen using a concave mirror in order to obtain a sharp image on the screen he will have to shift the mirror.

1. Towards screen
2. Away from the screen
3. Neeta towards or away from the screen depending upon the position of the object
4. To a position very far away from the screen

Q4. To find the focal length of a concave mirror Sita should choose which one of the following setupsa)

1. mirror holder and screen holder
2. Screen holder and scale
3. A mirror holder screen holder and I scale
4. Screen a mirror holder for them and a scale

Q5 A student obtained a sharp image of a burning candle placed at the further end of a laboratory table, on a screen using a concave mirror for getting better value of focal length of the mirror, the subject teacher suggest him for focusing of well illuminated distant objec, t what should the student do?

1. He should move the mirror away from the screen
2. He should move the mirror slightly towards screen
3. He should move the mirror as well as the screen towards the newly selected object
4. He should move only the screen towards the newly selected object.

Q6. In convex mirror principal focus is

1. behind the mirror
2. in front of the mirror
3. can be anywhere
4. none

 Q7. Image formed by a convex mirror of a real object is

1. real and enlarged
2. Virtual and enlarged
3. Priyal and smaller
4. Virtual and smaller

Q8. A concave mirror is dipped in water then its focal length will be

1. Increase
2. Decrease
3. remains the same
4. increase or decrease

Q9. An object of size 7 cm is placed at 27 CM in front of a concave mirror of focal length 18 cm at what distance from the mirror should icecream be placed so that a sharp focused image can be obtained

1. 54 cm
2. 10.8 cm
3. 27 cm
4. 18 cm

Q10. No matter how far you stand from a spherical mirror your image appears erect the mirror may be

1. Plane
2. Concave
3. Convex
4. Either plane or convex

Q11. Light enters from air to glass plate having refractive index 1.5 what is the speed of the light in the glass the speed of light in vacuum is 3×10⁸ metre per second

1. 0.5 ×10⁸ m/s
2. 2×10⁸ m/s
3. remains same
4. none

Q12. Dentist use which of the following for or teeth inspection

1. Convex lens
2. Convex mirror
3. Concave lens
4. Concave mirror

Q13 A concave lens by focal length 15cm forms an image 10cm from the lens then object distance is

1. -30 cm
2. 30 cm
3. 20 cm
4. None

 Q14. If an object is placed between focus and optical centre of convex lens image formed is

1. Real ,small
2. Real ,enlarged
3. Virtual, inverted
4. Virtual, erect

Q15. Are of light enters from glass to water what is the angle of critical incidence, ang=1.5 and anw= 1.33

1. cos-1(8/9)
2. sin-1(8/9)
3. sin-1(9/8)
4. None

Q16. The formation of rainbow is due to

1. Refraction
2. Dispersion
3. Total internal reflection
4. All

Q17. Explain the twinkling of stars.

Q18. Draw diagram for refraction through prisms showing all angle and all rays with their name.

Q19. Why does the sun appear reddish early in the morning?

Q20. Draw a ray diagram for the rectangular glass slab showing all the angles and the rays with their names.

Q21. Draw ray diagram for the convex lens when

a) object is at the center of curvature

b) object is situated at the focus

c)when the object is situated between focus and the optical centre of the lens.

 Q22. A 4 cm tall object is placed perpendicular to the principal axis of a convex lens of focal length 24 cm, the distance of the object from the lens is 16 cm, find the position ,size and nature of the image formed using the lens formula.

Q23. A concave lens has a focal length of 20cm. At what distance from the length of the 5 cm tall object can it be placed so that it forms an image at 15 cm from the lens? Also calculate the size of the image formed.

**CASE STUDY:**

 Q24. A child is standing in front of a magic mirror ,she find the image of her head bigger, the middle portion of her body of the same size and that of the leg smaller, the following is the order of combination for the magic mirror from the top:

I)

1. Plane convex and concave
2. convex concave and plane

c. concave plane and convex

d) convex plane and concave

II) to get an image larger than the object one can use

1. Convex mirror but not a concave mirror
2. Are concave mirror but not a convex mirror
3. Idhar a convex mirror or a concave mirror
4. A plane mirror

III) a convex mirror has wider field of view because

1. The image formed is much smaller than the object and large number of images can be seen
2. The image form is much closer to the mirror
3. both a and b
4. None

IV) insight view Mirrors of car which of the following is used

1. Convex mirror
2. Concave mirror
3. Convex lens
4. Concave lens

Q25. What is the power of a lens? Defined with units, what will be the power of combination of two lenses, write the formula power of a convex lens is 10 cm and find out its focal length.

**ASSERTION AND REASON:**

Q26. Assertion(A)- the centre of curvature is not a part of the mirror it lights outside its reflecting surface .

Reason (R)-the reflecting surface of a spherical mirror forms a part of the ice pair this spare has a centre.

1. Assertion and reason both are correct and reason is the right explanation of assertion.
2. Assertion and reason both are correct but explanation of the assurtion is not correct.
3. Assertion is correct but reason is not correct
4. Assertion is not correct but reason is correct
5. Both assertion and reason are not correct.

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**THE JAIN INTERNATIONAL SCHOOL**

**HOLIDAY HOMEWORK(2023-24)**

**ASSIGNMENT CLASS:** **10**

**SUBJECT: Chemistry**

1. What do you mean by balanced equation?

2. What are the advantages of using chemical equation?

3. What is the limitation of chemical equation?

4. What is electrolysis decomposition?

5. What is photochemical decomposition?

6. What is the condition necessary for combustion?

7. Name any two ANTIOXIDANT used by the industries?

8. Is copper more reactive than iron, Give a reaction in support of your answer?

9. What is the type of reaction in which gain of electron takes place?

10. What happens when a strip of zinc is dipped in a copper sulphate solution?

11. How would you answer that silver is chemically less reactive than copper?

12. Describe the oxidation and reduction in terms of oxygen gain or loss. Give suitable examples?

13. What information do we get from a balanced chemical equation?

14. Give the use of decomposition reaction?

15. What is the minimum temperature at which a substance catches fire called?

Instruction – Do the assignment in the comment sheet

**The Jain International School, Kanpur**

**BIOLOGY WORKSHEET**

**( Class X)**

1. Define nutrition,autotrophs, photosynthesis and heterotrophs.
2. Give two examples of parasites in plants.
3. Mention the two types of Nutritions.
4. Give two examples of heterotrophic nutrition in plants.
5. Name the photosynthetic organ, photosynthetic organelle and site of photosynthesis.
6. What is the function of Villi.
7. Give the appropriate terms to the following statement a) any substance taken into the body for the purpose of providing nutrition.b) conversion of complex food particles into simpler food particles in presence of enzymes.
8. What is an alimentary canal?
9. Write three differences between autotrophic and heterotrophic nutrition.
10. Give the overall reaction for photosynthesis. From where do plants get the raw materials needed for it?
11. How does the Amoeba intake food? Briefly mentioned.
12. Write the accessory glands of man that help in digestion of food. Mention one role of each gland.
13. What is mastication and peristaltic movement?
14. Mention any two role of each bile juice, HCl and saliva
15. In which form does plant and animal store their food respectively?
16. Mention the main steps in the process of photosynthesis. Write in short about each step
17. Discuss the digestion of food in the small intestine in detail.
18. What is emulsification of fat?
19. Explain dental caries and their causes.
20. What precautions do we have to take to prevent dental caries?
21. Name two sphincter muscles present in the alimentary canal and their role.
22. Draw a well labeled diagram of the section of leaf,stomata,chloroplast tooth( inside view) and human digestive system.
23. Explain symbiotic and saprophytic nutrition.
24. What are enzymes? Name any five enzymes and their role.
25. Answer the following:
26. Solution used to test the presence of starch.
27. Solution used to remove chlorophyll from the leaf
28. Why do we use KOH?

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# The Jain International School, Kanpur

**Holiday Homework Worksheet**

**Subject-Mathematics (041)**

Class: X

**Real numbers**

1. The HCF of two numbers and is 5 and their LCM is 200. Find the product
2. Prove that is an irrational number, given that is an irrational number.
3. If HCF of 65 and 117 is expressible in the form of , find the value of
4. Write whether on simplification gives an irrational or a rational number.
5. What is the HCF of smallest prime number and smallest composite number.
6. Prove that is an irrational number.
7. Examine whether can end with the digit 0 for any .
8. Show that is a composite number.
9. Three containers contain 27 litres,36 litres and 72 litres of milk. What biggest measure can measure exactly the milk in the three containers?
10. Find the largest number which divides 438 and 606, leaving remainder 6 in each case.
11. Find the least number of square tiles required to pave the ceiling of a room 15 m 17 cm long 9 m 2 cm broad.

**Polynomials**

1. Find the quadratic polynomial, sum and product of whose zeroes are -1 and -20 respectively. Also, find the zeroes of the polynomial so obtained.
2. Find the value of such that the polynomial has sum of its zeroes equal to half of their product.
3. If and are zeroes of the quadratic polynomial , then form a quadratic polynomial whose zeroes are 2 and
4. If one zero of the quadratic polynomial is negative of the other, then find zeroes of
5. If and Are the zeroes of the polynomial find the value of .

**Pair of linear equations in two variables**

1. Solve the following pair of linear equations by substitution method:

4. Solve the following pair of linear equations by elimination method:
5. ,
6. ,
7. Solve the pair of linear equation graphically and find the vertices and area of the triangle formed by these lines and the :

,

1. Find the value of for which the given system of equations has infinitely many solutions:

,

1. The sum of two numbers is 8 and the sum of their reciprocals is Find the numbers.
2. Two years ago, a man was 5 times as old as his son. Two years later, his age will be 8 more than 3 times the age of his son. Find their present ages.
3. 8 chairs and 5 tables for a classroom cost Rs 10500, while 5 chairs and 3 tables cost Rs 6450. Find the cost of each chair and that of each table.
4. Taxi charges in a city consist of fixed charges and the remaining depending upon the distance travelled in kilometres. If a person travels 60 km, he pays Rs960, and for travelling 80 km, he pays Rs1260. Find the fixed charges and the rate per kilometre.
5. The ratio of incomes of two persons is 9: 7 and the ratio of their expenditure is 4: 3 if each of them manages to save Rs 2000 per month find their monthly incomes.
6. If we add 1 to the numerator and subtract 1 from the denominator a fraction reduces to one. It becomes if we add 1 to the denominator. What is the fraction?
7. Yash scored 40 marks in a test, receiving 3 marks for each right answer and losing 1 mark for each wrong answer. Had 4 marks been awarded for each correct answer and 2 marks being deducted for each incorrect answer then Yash would have the score 50 marks? How many questions were there in the test?
8. 5 years hence the age of Jacob will be 3 times that of his son .5 years ago Jacob's age was 7 times that of his son. What are their present ages?
9. The area of a rectangle gets reduced by 9 square units if its length is reduced by 5 units and breath is increased by 3 units. If we increase the length by 3 units and the breath by 2 units the area increases by 67 square units. Find the dimensions of the rectangle.

**Coordinate Geometry**

1. Show that the points A (7,10), B (-2,5) and C (3, -4) are the vertices of an isosceles right triangle.
2. Show that the points A (3, 0), B (4, 5), C (-1, 4) and D (-2, -1) are the vertices of rhombus. Find its area.
3. If is equidistant from the points A (6, -1) and B (2,3), show that .
4. Find the coordinates of the point which divides the join of A (-1,7) and B (4, -3) in the ratio 2: 3.
5. Find the centroid of the triangle ABC whose vertices are A (-1,0), B (5, -2) and C (8,2).
6. The mid-point of the line segment joining the points A (2a, 4) and B (-2, 3b) is C (1, 2a+1). Find the values of a and b.