**Mahendra Model School**

**Holidays’ Home Work**

Class X

**English:-**

1. Write any five stories.
2. Write and learn value based question answers of the chapter done in the class.
3. Write 100 News Headlines from English News paper.
4. Learn question answers of chapter -1 and 2.
5. Write analysis of the poem done in the class.

**Mathematics:** Do the given assignment

**Science:-** Do the given assignment

**Hindi:-** Do the given assignment

**Social Science:-** Do the given assignment

**MATHEMATICS Assignment**

Class X β

**Topics:**

1. History of Mathematics – Include the following sub topics:

a) Story of digits 0-9

b) Story of π

c) History of Pythagoras Theorem

2. Geometry in real life: In this project, the students should try to find situations in daily

life where mathematical concepts can be effectively used.

3. Contributions of the following Mathematicians:

a) Aryabhatta

b) Euclid

c) Pythagoras

Guidelines for the project: Each student will prepare and submit one project from the above

mentioned topics. Following essentials are required to be fulfilled for its preparations:

a) Total length of the project report will be 10-12 pages (atleast)

b) The project will be hand-written and credit will be awarded to original drawings,

illustrations and creative use of materials.

c) The project will be developed in this sequence:

i. Cover page showing project title and student information.

ii. List of contents

iii. Acknowledgement

iv. Introduction

v. Description

vi. Bibliography

**NCERT – Mathematics Class X β**

Exercise 1.1 Page 7 Q 1, 2 &4

Exercise 1.2 Page 11 Q 1(iii), 2 (iii) 6,7

Exercise 1.3 Page 14 Q 2, 3(i , ii)

Exercise 1.4 Page 17 Q1 (vii, x) , 3(iii)

Exercise 2.1 Page 28 Q1 (iii, vi)

Exercise 2.2 Page 33 Q1 (iii), (iv), 2 (ii, iii, iv)

Exercise 2.3 Page 36 Q1 (ii), 2 (i), (ii), 3, 4, 5

Exercise 2.4 Page 36 Q1 (i), 2,3,4,5

Exercise 5.1Page 99 Q 2(v), 3(iv), 4(v, vi, xi , xii, xiv, xv)

Exercise 5.2Page 106 Q 2(ii), 3(iv), (v), 5(ii), 8, 9, 11, 12, 14, 15, 16, 18, 20

Exercise 5.3Page 112 Q 1(iii), 2(iii), 3(v, vi, vii, viii), 6, 7, 9, 10(ii), 11,13,16, 18&20

Exercise 5.4Page 115 Q 1, 3, 4 & 5

Exercise 8.1Page 181 Q 4, 5 , 7 (i) , 8 & 10

Exercise 8.2Page 187 Q 1(iii, v) , 3

Exercise 8.3Page 189 Q 1(iii, iv), 2 (ii), 4, 5 & 6

Exercise 8.4Page 193 Q 1, 3 (i) , 4 (iv) , 5 (ii, iii, v, vi, vii , ix & x)

HOLIDAYS’ ASSINGMENT- (MATHAEMATICS) α

1.Introduction to trigonometry- include the following sub-topics:-

a) History of the Pythagoras theorem

b) State and infer the applications of trigonometry in 5 famous buildings and 5 examples of finding the long distances.

2. Arithmetic progressions

a) Give concept of A.P., G.P. and H.P(Harmonic Progression)

3. Pair of linear equations in two variables

a) Illustrate the different methods of solutions of pair of linear equations geometrically and algebraically.

b) Give various examples or situations where we use this mathematical concept in daily life.

4. NCERT Mathematics Class X

Exercise 8.1 Page No. 181 Q-3, 5, 8, 9, 10

Exercise 8.2 Page No. 187 Q- 1(iii and v), 2, 3

Exercise 8.3 Page No. 189 Q-1(iii and iv), 3, 4, 6

Exercise 8.4 Page No. 193 Q- 2, 4(iii and iv), 5(iii, v, vii, viii, x)

Exercise 3.1 Page No. 44 Q- 3

Exercise 3.2 Page No. 49 Q- 2(iii), 3(iii and v)

Exercise 3.3 Page No. 53 Q-1(v and vi), 2, 3(ii, iii, v, vi)

Exercise 3.4 Page No. 57 Q- 2(ii, iii, v)

Exercise 3.5 Page No. 62 Q-2(ii), 4(iii, iv, v)

Exercise 3.6 Page No. 67 Q-1(v, vii, viii), 2(ii and iii)

Exercise 5.1 Page No. 99 Q-1(ii), 2(iii and v), 3(iii), 4(v, xii, xiv)

Exercise 5.2 Page No. 106 Q- 3 (iii, iv, v), 4, 6, 7, 9, 11, 12, 15, 17, 20

Exercise 5.3 Page No. 111 Q- 3(v, vi, viii, x), 4, 6, 11, 14, 16, 18, 19,

**Assignment - Science**

 **PHYSICS**

1. An electric bulb is rated as 220 v, 100 W. What is the power consumed when it is operated on 200 v?
2. Define electric current. What is the conventional direction of electric current?
3. How we measure electric current in an electric circuit?
4. Why does a conductor heats up when a current is flowing through it? Explain.
5. How much energy is required to move a charge of 5c between two points having a potential difference 1OV?
6. A current of 1.2 A is drawn from a cell for 2 minutes. Calculate the charge drawn from the cell.
7. Draw an electric circuit having a battery of 6v, two resistors 2 Ω & 3 Ω connected with a key & an ammeter?
8. By using Ohm’s law, define one Ohm.
9. The potential difference across a resistor of resistance 6 Ω is 150 v. Calculate the current passing through the Resister.
10. The wire of a heater has a resistance of 70 Ω. If a current of 5 A is passing through it then calculate the potential difference across the wire.
11. A convex mirror is used as a safety mirror in a shop. It has a focal length of 15 m. A person is standing 12 m away from this mirror. Find the position of his image.
12. An object of height 6 cm is placed 18 cm away from a concave mirror. The image is formed 12 cm before the mirror. Find out the following: (i) Focal length of the mirror (f) (ii) Radius of curvature (R) (iii) Magnification of the mirror (m) (iv) Image height (HI)
13. Describe phenomenon of refraction of light?
14. A coin in a glass beaker appears to rise as the beaker is slowly filled with water. Why?
15. A convex lens has a focal length of 10 cm. If the image produced by it is 15 cm behind from the optical centre, then determine the distance at which the object is placed? Also, find the magnification produced by the lens

 **CHEMISTRY**

Q1. Write and balance the following chemical equation:

a) nitric acid rects with calcium hydroxide and forms calcium nitrate and water

b) sodium bicarbonate decomposes to give sodium carbonate ,carbon dioxide and water

c) sodium chloride reacts with water to give sodium hydroxide,hydrogen gas and chlorine molecule

d) aluminium metal reacts with sulphuric acid to give aluminium sulphate and hydrogen gas

e) phosphorus pentoxide reacts with water to give phosphoric acid

Q2. What change in colour is observed when white silver chloride is left exposed to sunlight?

State the type of chemical reaction in this change.Also writes the equation.

Q3. Solid CaO was taken in a container and water was added slowly to it

a) State the two observations made in the experiment.

b) Write the name and chemical formula of the product formed.

Q4.What changes in the colour of iron nails and copper sulphate solutions do you observe after keeping the ironnails dipped in copper sulphate solution for about 30 minutes?

Q5.What is corrosion? Give three example of corrosion.

Q6.What is rancidity? Write different methods of preventing rancidity.

Q7. PbO2+ 4HCl → PbCl 2 + Cl 2+2H2O

Identify the oxidizing agent and reducing agents

Q8. What is oxidation reaction? Give an example of oxidation reaction. Is oxidation an exothermic or endothermic reaction?

Q9.on what basis is a chemical equation balanced?

Q10 write chemical properties of metals and non metals?

Q11 explain extraction of metals of low high and medium reactivity?

Q12 explain properties of ionic compound?

**BIOLOGY -**

TRANSPORTATION IN HUMANS

Q1. What is the role of blood transportation of materials in our body?

Q2. Draw and explain a well labeled diagram of section of human heart.

Q3. How does the exchange of oxygen and carbon dioxide take place in human body?

Q4. Justify the difference in the structure of heart of mammals, birds, reptiles, amphibians and fishes?

Q5. What is blood pressure? What is “Systolic” and ‘’Disytolic” pressure?

Q6. What is the role of platlets in our blood? Why is clotting of blood very important?

Q7. What is the composition of Lymph? What is its function?

Q8. What is the difference between blood plasma and lymh?

Q9. Given reason for the following:

(a)The blood pressure is much greater in arteries than in veins.

(b)The walls of ventricles are thicker

(c)The veins have valves

(d)Valves are present between auricles and ventricles.

(e)Right and left side of heart are separated by a wall (Septum)

Q10. What is Lymph? What is its role?

TRANSPORTATION IN PLANTS

Q1. Why is proper system of transport essential in plants?

Q2. Why do plants have low energy needs as compared to animals?

Q3. Differentiate between Transpiration and Translocation?

Q4. How do roots absorb water? Write the factors which help to do so?

Q5. What are the advantages of transpiration?

Q6. Differentiate between Xylem and Philon?

EXCRETION

Q1.What do you mean by Excretion? Why is it essential in living organism?

Q2. Draw a well labeled diagram of excretory system in humans?

Q3. How is urine produced? What is its composition?

Q4. Name the basic filtration unit in the kidney? Draw its labeled diagram AND explain its function?

Q5. How can we control the urge to urinate?

Q6. What are the functions of Kidneys?

Q7. What happens if the kidney fail to function? What are the causes of kidney failure? How can it cured?

Q8. What is Dialysis? How is it done?

Q9. Name the excretory products in plants? How are they excreted?

**i. Prepare a model on renewable and non-renewable sources of energy.**

**ii. Make notes in your notebook of chapter sources of energy.**

**iii. Collect information about any one indian scientist and display it in chart creatively.**

**HOLIDAYS’ ASSIGNMENT - HINDI**

**1. निम्नलिखित पत्र लिखिए :-**

१. अनियमित डाक वितरण में सुधार के लिए अपने क्षेत्र के डाकपाल को पत्र लिखिए।

२.दोस्त को छुट्टियों में अपने पास बुलाने के लिए पत्र लिखिए।

३.अपने पसंदीदा समाचार पत्र के मुख्य संपादक को बढ़ती हुई महंगाई पर चिंता प्रकट करते हुए पत्र लिखिए।

**2. निम्नलिखित निबंध लिखिए :-**

१. कंप्यूटर के लाभ और हानि

२. मेक इन इंडिया

३. नोटबंदी से होने वाले लाभ व हानियाँ

४. शिक्षा : एक प्राथमिक ज़रूरत

५. प्रधानमंत्री नरेंद्र मोदी जी

**3. अवकाश के दौरान प्रसिद्ध लेखकों की कोई भी पुस्तकें /नावेल पढ़े। साथ ही -**

१. पुस्तक में से किन्ही दो पात्रों को चुनिए। उनके चित्र बनाएं या चिपकाएं।

२. पठन के आधार पर उन पात्रों का दस वाक्यों में विवरण दे।

३. दोनों पात्रों में तुलना स्पष्ट कीजिए। वह कैसे एक -दूसरे से अलग हैं।

4. 'बालगोबिन भगत' पाठ पढ़कर उसमें से दस सरल , दस मिश्र एवं दस सयुंक्त वाक्य लिखिए।

5.'नेताजी का चश्मा ' पाठ में से किन्हीं बीस वाक्यों का पद परिचय दीजिए।

6. 'वाच्य परिवर्तन' विषय पर एक चार्ट तैयार कीजिए।

7. सूरदास के पदों में कृष्ण के प्रति गोपियों की अनन्य भक्ति प्रकट हुई है। वर्तमान में भी हम अपने आस - पास भक्ति के विभिन्न स्वरूप देखते है। विभिन्न धर्मों में दिखाई देने वाले इन स्वरूपों के विषय में अपने विचार प्रकट कीजिए।

 **Holidays’ assignment- Subject-social science**

1. Make a project report on the following topics :-
2. Development and changes in agriculture of India since Indipendence. (roll no.1-6)
3. Challenges facing the democratic system.(roll no. 7-12)
4. How to became an aware consumer. (roll no.13-18)
5. Multipurpose river valley project. (roll no.19-24)
6. Tourism.(roll no.25-30)
7. Industrial pollution and environmental degradation.(roll no.31-36)
8. Need of media role in democratic system. (roll no.37 onwards)
9. Write the following questions :-
10. What are the three stages of resource planning in India?
11. How is over irrigation responsible for land degradation ? Which states of India face this problem?
12. Advocate any five measures to control land degradation .
13. Describe any three features of arid soil.
14. Which part of India is made up of alluvial soil ?
15. Explain any 3 factors responsible for the formation of soil .
16. Define :-1. I.M.R. 2. Literacy rate 3. Net attendance ratio
17. Define sustainable development.
18. What is B.M.I.?
19. What is the main criteria used by the world bank in classifying different countries? What are the limitation of this criteria?
20. Why different people have different development goal?
21. What is per capita income ? what is demerits to be taken as index comparision ?
22. What are the non-monetary ? Give some example.
23. “The Earth has enough resources to meet the needs of all but not enough to meet the greed of one “ how is the statement relevant to the discussion of the development ?
24. What were the two main causes of resentment in Belgium in 1960? How was the conflict solved?
25. Write three provisions of the act passed in Sri Lanka in 1956 ?
26. Mention any three demands of Sri Lankan Tamils?
27. In which city is the head quarter of the European union located?
28. What is the prudential reason behind power sharing ?
29. Illustrate three element of Belgium model of accommodation .
30. What is the horizontal distribution of power? Explain any two advantages of this form of power sharing.
31. What do you understand by purna swaraj ?
32. When was Gandhi –Irwin Pact signed ? What were its 2 features ?
33. What was Rowlatt Act ?
34. What was Khilafat Movement ?
35. What is the significance of 26 January 1930?
36. Write a short note on Baba Ramchandra ?
37. How did Abindranath Tagore portray Bharat Mata in his painting ?
38. Trace the history of Indian flag upto 1997 .
39. In what ways reinterpretation of history created a feeling of Nationalism.
40. Write 3 main characteristics of Trieu Au , the rebel women of Vietnam ?
41. Explain any 3 challenges faced by the democratic republic of Vietnam?
42. Give any 4 features of HO Chi Minh Trail.
43. Who was Ho Chi Minh? What was his contribution of Vietnam?
44. What had happened in the Indo China by the middle of 1880s?

**NOTE:-** do the assignment in your social science note book.

1. निम्नलिखित विषयों पर एक परियोजना रिपोर्ट तैयार करें: -

(ए) स्वंत्रता के बाद भारत के कृषि में विकास और परिवर्तन। (रोल नंबर .1-6)

(बी) लोकतांत्रिक व्यवस्था की चुनौतियां। (रोल नंबर 7-12)

(सी) कैसे एक जागरूक उपभोक्ता बने (रोल नंबर 13-18)

(डी) बहुउद्देशीय नदी घाटी परियोजना (रोल नंबर 19-24)

(ई) पर्यटन। (रोल नंबर 25-30)

(च) औद्योगिक प्रदूषण और पर्यावरण क्षरण (रोल नंबर 31-36)

(जी) लोकतांत्रिक व्यवस्था में मीडिया की भूमिका की आवश्यकता। (रोल नंबर .37 से आगे)

2. निम्नलिखित प्रश्न लिखें: -

1. भारत में संसाधन योजना के तीन चरण क्या हैं?

2. भूमि अपकर्षण के लिए अधिक सिंचाई कैसे जिम्मेदार है? भारत के कौन से राज्य इस समस्या का सामना करते हैं?

3. भूमि अपकर्षण को नियंत्रित करने के कोई भी पांच उपाय बताएं ।

4. शुष्क मिट्टी के किन्ही तीन विशेषताओं का वर्णन करें।

5. भारत का कौन सा हिस्सा जलोढ़ मिट्टी से बना है?

6. मिट्टी के गठन के लिए उत्तरदायी किन्ही भी 3 कारकों को समझाओ।

7. परिभाषित करें: -1। I.M.R. 2. साक्षरता दर 3. उपस्थिति अनुपात

8. स्थायी विकास को परिभाषित करें

9. बी.एम.आई क्या है?

10. विभिन्न देशों के वर्गीकरण के लिए विश्व बैंक द्वारा उपयोग किए जाने वाले मुख्य मानदंड क्या हैं? इस मापदंड की सीमायें क्या है?

11. विभिन्न लोगों के विकास के विभिन्न लक्ष्य क्यों हैं?

12. प्रति व्यक्ति आय क्या है? सूचक तुलना के रूप में लेने के लिए दोष क्या है?

13. गैर-मौद्रिक क्या हैं? कुछ उदाहरण दें

14. "पृथ्वी के पास सभी जरूरतों को पूरा करने के लिए पर्याप्त संसाधन हैं, लेकिन एक के लालच को पूरा करने के लिए पर्याप्त नहीं है". विकास की चर्चा से यह कथन कैसे सम्बंधित है?

15. 1960 में बेल्जियम में असंतोष के दो मुख्य कारण क्या थे? संघर्ष का हल कैसे हुआ?

16. 1 9 56 में श्रीलंका में पारित अधिनियम के तीन प्रावधानों को लिखें?

17. श्रीलंकाई तमिलों की किन्ही भी तीन मांगों का उल्लेख करें?

18. यूरोपीय संघ का मुख्यालय किस शहर में स्थित है?

19. सत्ता साझा करने के पीछे विवेकपूर्ण कारण क्या है?

20. बेल्जियम के आवास मॉडल के तीन तत्वों का उदाहरण दें।

21. बिजली का क्षैतिज वितरण क्या है? शक्ति बांटने के इस माध्यम के किन्ही भी दो फायदे समझाएं।

22. आप पूर्ण स्वराज से क्या समझते हैं?

23. गांधी-इरविन संधि कब पर हस्ताक्षर किए गए थे? इसकी 2 विशेषताएं क्या थीं?

24. रॉवलैट अधिनियम क्या था?

25. खिलाफत आंदोलन क्या था?

26. 26 जनवरी 1 9 30 का क्या महत्व है?

27. बाबा रामचंद्र पर एक संक्षिप्त नोट लिखिए?

28. अबीद्रनाथ टैगोर ने अपनी चित्रकला में भारत माता को कैसे चित्रित किया?

29. 1997 तक का भारतीय ध्वज के इतिहास का व्याख्यान करें।

30. इतिहास के पुन: व्याख्या के तरीके से राष्ट्रवाद की भावना कैसे पैदा हुई?

31. वियतनाम की विद्रोही महिलाओं, ट्रियू एयू के तीन मुख्य विशेषताओं को लिखें?

32. वियतनाम लोकतांत्रिक गणराज्य के सामने खड़ी 3 चुनौतियों का वर्णन करें?

33. हो ची मिन्ह ट्रेल के किन्ही भी 4 विशेषताओं का वर्णन करे।

34. हो ची मिन्ह कौन था? वियतनाम के लिए उनका योगदान क्या था?

35. 1880 के दशक के मध्य तक इंडो चीन में क्या हुआ था?

नोट: - असाइनमेंट अपने सामाजिक विज्ञान नोट बुक में करें।