

HOLIDAY HOME WORK : CLASS X : MATHEMATICS

Complete all the NCERT exercise questions of chapter-1 & 2 and the following questions:

1. Find whether 839 is a prime number or composite number. Justify your answer.
2. Is it possible that HCF & LCM of two numbers be 24 and 540 respectively? Justify your answer.
3. If the sum of two numbers is 1215 and their HCF is 81, find the number of such pairs.
4. Find two natural numbers whose difference is 66 and LCM is 360 .
5. Find the smallest number which leaves remainders 8 and 12 when divided by 28 and 32.
6. Find the greatest number of 6 digits exactly divisible by 24,15 and 36.
7. Find the smallest number which when increased by 17, is exactly divisible by both 520 and 468.
8. Prove that $\sqrt[n]{n}$ is an irrational number, where n is a positive non perfect square number.
9. Prove that $\sqrt[n]{p}$ is irrational , where p is a positive non perfect square number.
10. Prove that $\sqrt{x} + \sqrt{y}$ is irrational where \sqrt{xy} is irrational.
11. Show that \sqrt{m} is an irrational; number where m is not a perfect square number.
12. Show that $5\sqrt{2}$ is irrational where $\sqrt{2}$ is irrational.
13. Show that one and only one out of n,(n+1) and (n+2) is divisible by 3, where n is any positive integer.
14. Prove that if x and y both are odd positive integers, then $x^2 + y^2$ is even, but not divisible by 4.
15. Show that the square of any positive integer cannot be of the form 5q+2 or 5q+3 for any integer q.
16. Show that the square of any odd integer is of the form 4m+1 for some integer m.
17. Show that one and only one out of n,n+4,n+8,n+12 and n+16 is divisible by 5, where n is any positive integer.
18. Find the HCF of 235 and 75. Represent the HCF in the linear combination $235x + 75y$.
19. Check whether 8^n ends with the digit '0' or not.
20. Factorise 840. How does it justify the three conditions of Fundamental Theorem of Arithmetic, i.e. composite or not, uniqueness and order of factors? Explain.

Holiday Homework STD –X

1. Children who are differently-abled, should be part of the general schools. You are a strong believer of this theory. Write a letter to the editor of a national daily, in 150 words, sharing your views and requesting him to publish an article on the same. You are Mohit/Anshul.

2. Assume that you are Anil Saxsena, the purchase manager of Alpha Engineering Company, Salt Lake city, Calcutta. Your company sent an order for 15 Hp scanners to National Systems limited, Electronic City. Bangalore but you received only 12 scanners, Write a letter to the manager of NSL making a complaint and asking him to send the remaining 3 scanners.
3. You are Manish Agarwal, General Manager Career Consultants Kolkata. Write an order letter to the Sales Manager of Balaji Solution Kolkata, You want four travel mate Acer Note books, model TM244 FX at the quoted price of 49999 each. You want the delivery within a week.
4. Write a story in about 200-250 words which begins as follows.

‘Sitting alone on a beach I felt myself like a speck of sand against the vastness of the Sea. Suddenly I saw a boat coming towards the shore.....’
5. Write a story in about 200-250 words beginning with the following line.

‘Night before the Zonal Debate Competition.....everyone was fast asleep,while I was practising.suddenly.....’

PHYSICS

1. Define electric current. Write its SI unit.
2. What do you mean by convectional current? Mention its direction.
3. Find the number of electrons constituting one coulomb of charge.
4. Define potential difference. Write its SI unit.
5. What is resistance of a conductor? What are the factors on which it depends?
6. Write Ohm's law. Write a mathematical expression for it.
7. Describe an activity to verify Ohm's law.
8. If resistance of a conductor reduced to half, what happens to the current passing through it at constant potential difference?
9. Draw the symbols of the following components a) resistor b) rheostat c) plug key d) electric cell.
10. Find the work done for the flow of 30 C of charge from one end of the conductor to another end by applying potential difference of 12 volt.

CHEMISTRY

11. Why should Magnesium ribbon be cleaned before burning.
12. What does one mean by exothermic and endothermic reactions? Explain.
13. Why is respiration considered as an exothermic reaction?
14. Write the balanced chemical equation for the following chemical reactions.
 - a- Potassium bromide + Barium iodide \rightarrow Potassium iodide + Barium bromide
 - b- Zinc carbonate \rightarrow Zinc oxide + Carbon dioxide
 - c- Magnesium + Hydrochloric acid \rightarrow Magnesium chloride + Hydrogen
15. Balance the chemical equations $\text{Fe}_2\text{O}_3 + \text{Al} \rightarrow \text{Al}_2\text{O}_3 + \text{Fe}$.
16. Balance the chemical equations $\text{AgNO}_3 + \text{Cu} \rightarrow \text{Cu}(\text{NO}_3)_2 + \text{Ag}$
17. Define a chemical reaction. Give an example of chemical reaction.
18. Mention the characteristics of chemical reactions.
19. Explain how to make an equation more informative?
20. What do you mean by a balanced chemical equation? Give an example.

BIOLOGY

21. How do carbohydrates, proteins and fats get digested in human beings?
22. What would happen to rate of photosynthesis in each of the following situations?
 - A- In cloudy days,
 - B- No rainfall in the area,
 - C- Stomata get blocked due to dust
23. Explain the three path ways of breakdown of glucose in living organisms.
24. Differentiate between the different modes of autotrophic nutrition in plants.
25. What happens to the rate of breathing during vigorous exercise and why?
26. Mention the factors on which diffusion in plants depends.
27. Why are the digestive enzymes present in inactive forms in the body when we can require their action any time?
28. Name the various digestive enzymes, the gland from where these are secreted, and mention the function of each.
29. Assume that you are a veterinary surgeon and you had removed a good length of the small intestine of a bear that was suffering from an intestinal tumor. Now would you suggest a plant based or meat based diet for the bear after its recovery? Give reason to your answer.
30. What is meant by residual volume of air? What is its importance?
31. Practice all diagrams with labeling up to respiration.

SANSKRIT

Write the answers in home work copy
page no 239-252 of grammar Book

HISTORY

1. Define the following terms-

Modern State, Nation-State, Absolutist, Utopian, Plebiscite, Suffrage, Conservatism, Lapatrie, Le citoyen, Napoleonic code, Elle, Zollverein.

2. On the outline map of Europe locate and label the European countries of 18th and 19th century.
3. Write the significance of the following years:
1848, 1790, 1804, 1750, 1834, 1815
4. What were the different measures and practices followed by the French revolutionaries to develop a sense of common identity?
5. What is political liberalism and economical liberalism stood for?

CIVICS

1. Define the following terms:
Ethnic, Prudential, Majoritarianism, civil war, Community Govt., Coalition Govt , Political Party , Pressure Groups.
2. Describe the different forms of Power sharing in Modern Democracy.
3. What are the different steps taken in the constitution of Belgium which helped to accommodate the ethnic diversities?

GEOGRAPHY

Topic - Resources and Development

1. Make a report on Consumption and Conservation of Resources in your locality.
2. Prepare a short note on the type of soil available in your locality.
3. On the outline map of India, locate and label the following soil type regions:
(a)Forest and mountainous soil
(b)Red and yellow type soil
(c)Black soil
(d)Laterite soil
(e)Arid soil
4. Write the answers of NCERT Exercise of "Resources and Development".
5. Define the following terms:
Resources, Biotic Resources, Abiotic Resources, Renewable Resources, Non-Renewable Resources, National Resources, International Resources, Potential Resources, Developed Resources, Stock, Reserves, Net Sown Area, Gross Cropped Area, Sustainable Development, Resource Planning, Bhangar, Khadar, Soil Erosion, Sheet Erosion, Strip Cropping, Shelter-Belt.

ECONOMICS:

Topic: Development

1. List a few examples of environmental degradation that you may have observed around you.

2. "Different people have different goals "Justify this statement with 10 examples.
3. "Individual Development influences the National Development" Explain it.
4. Define the following terms:
Individual Development, National Development, Per Capita Income, National Income, Infant Mortality Rate, Net attendance Ratio, HDI, Life Expectancy, Literacy Rate, Gross Enrollment Ratio.

HINDI

1. बडे भाईसाहब
2. साखी
3. हरिहरकाकाप्रश्नोत्तरपूराकरे
4. पर्यावरण और प्रदूषण , नैतिक शिक्षा (अनुच्छेद लिखे)

ODIA

Raghabanka Lank Jatranukula , Kalijugarasamaptiebang Mishra Babu –
Write all Question and Answer.