HOLIDAY HOMEWORK FOR SUMMER VACATION

CLASS: X SESSION (2023-24)

SUBJECT: MATHEMATICS

SECTION-A-

MCQ TYPE QUESTIONS

Q1. If a = 2^3 x 3, b = 2 x 3 x 5, c = 3^n x 5 and LCM (a, b, c) = 2^3 x 3^2 x 5, then n = (a) 1 (b) 2 (c) 3 (d) 4

Q2. The least number which is a perfect square and is divisible by each of 16, 20 and 24 is

(a) 240 (b) 1600 (c) 2400 (d) 3600

Q3. If two positive integers a and b are written as a = xy^2 and b = xy^3 ; x, y are prime numbers, then HCF (a, b) is (a) xy (b) xy^2 (c) x^3y^3 (d) x^2y^2

Q4. The least number that is divisible by all the numbers from 1 to 10 (both inclusive) is (a) 10 (b) 100 (c) 504 (d) 2520

Q5. If the product of two numbers is 1050 and their HCF is 25, find their LCM.

 (a) 42 (b) 25 (c) 105 (d) none of these

Q6. The LCM of two numbers is 9 times their HCF. The sum of LCM and HCF is 500. Find their HCF. (a) 40 (b) 90 (c) 50 (d) none of these

Q7. HCF of ($2^3 \times 3^2 \times 5$), ($2^2 \times 3^3 \times 5^2$) and ($2^4 \times 3 \times 5^3 \times 7$) is

(a) 30 (b) 48 (c) 60 (d) 105

Q8. The product of two numbers is 1600 and their HCF is 5. The LCM of the numbers is (a) 8000 (b) 1600 (c) 320 (d) 1605

Q9. The HCF of two numbers is 27 and their LCM is 162. If one of the numbers is 54, what is the other number? (a) 36 (b) 45 (c) 9 (d) 81

Q10. LCM of ($2^3 \times 3 \times 5$) and ($2^4 \times 5 \times 7$) is - (a) 40 (b) 560 (c) 1680 (d) 112.
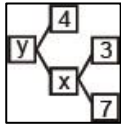
Q11. What will be the least possible number of the planks, if three pieces of timber 42 m, 49 m and 63 m long have to be divided into planks of the same length?

(a) 5   (b) 6   (c) 7   (d) none of these

Q12. Given that LCM (91, 26) = 182, then HCF (91, 26) is:

(a) 13   (b) 26   (c) 7   (d) 9

Q13. The values of x and y in the given figure are:

(a) x = 10; y = 14 (b) x = 21; y = 84 (c) x = 21; y = 25 (d) x = 10; y = 40

Q14. If one zero of the quadratic polynomial $x^2 + 3x + k$ is 2, then the value of k is:

(a) 10   (b) -10   (c) 5 (d) -5

Q15. The zeroes of the quadratic polynomial $x^2 + 10x + 16$ are:
(a) both +ve   (b) both -ve
(c) one +ve and one -ve (d) both equal

Q16. A quadratic polynomial, whose zeroes are -4 and -5, is
(a) $x^2-9x + 20$ (b) $x^2 + 9x + 20$
(c) $x^2-9x- 20$ (d) $x^2 + 9x- 20$

Q17. The sum and the product of the zeroes of polynomial $6x^2 - 5$ respectively are
(a) 0, −6/5 (b) 0, 6/5 (c) 0, 5/6 (d) 0, −5/6

Q18. **Q1.If one zero of the quadratic polynomial $x^2 + 3x + k$ is 2, then the value of k is**
(a) 10   (b) -10   (c) 5   (d) -5

Q19. If one of the zeroes of the quadratic polynomial $(k - 1) x^2 + kx + 1$ is − 3, then the value of k is

(a) 4/3   (b) -4/3   (c) 2/3   (d) -2/3

Q20. A quadratic polynomial, whose zeroes are -3 and 4, is

(a) $x^2- x + 12$ (b) $x^2 + x + 12$ (c) $x^2/2 + x /2- 6$ (d) $2x^2 + 2x - 24$
Q21. If the zeroes of the quadratic polynomial $x^2 + (a + 1) x + b$ are 2 and -3, then

(a) a = -7, b = -1   (b) a = 5, b = -1   (c) a = 2, b = -6   (d) a – 0, b = -6

Q22. If graph of a polynomial does not intersects the x-axis but intersects y-axis in one point, then no. of zeroes of the polynomial is equal to

(a) 0   (b) 1   (c) 0 OR 1   (d) none of these

Q23. If 2 and 1/2 are the zeros of px^2+5x+r, then

  a) p = r = 2   (b) p = r = - 2   (c) p = 2, r= -2   (d) p = -2, r= 2

Q24. If α and β are the zeros of $10x^2+20x-80$, then the value of $1/α+1/β$ is

  (a) 5/4   (b) 1/5   (c) 3/4   (d) 1/4

Q25. α and β are the zeros of $x^2 + (k^2 – 1)x – 20$, such that $α^2 – β^2 – αβ = 29$

   And α – β = 9 then, the value of k is

   (a) 1   (b) 0   (c) 2   (d) 3

Q26. If α and β are the zeros of $x^2 – (5 + 7k) x + 35k$, such that $α^2 + β^2 = 172$ then the value of k is-

a) $6\sqrt{3}$ b) $\sqrt{3}$ c) 3   d) $3\sqrt{3}$

Q27. What will be the value of $(α – β)^2$ if α and β are the zeros of

   $4x^2 – 27x – 40$?

a) 1369/16   b) 139/16   c) 1369/6   d) 19/16

<center>SECTION-B-</center>

Q28. 4 Bells toll together at 9.00 am. They toll after 7, 8, 11 and 12 seconds respectively. How many times will they toll together again in the next 3 hours?

Q29. Find the largest number which divides 70 and 125, leaving remainders   5   and   8   respectively.
.   **OR**

Two natural numbers whose sum is 85 and the least common multiple is 102, find them.
Q30. Prove that $5+3\sqrt{2}$ is an irrational number. Given that $\sqrt{2}$ is irrational.

Q31. Prove that $\sqrt{3}$ is irrational. OR Prove that $\sqrt{2}\sqrt{3}$ is irrational.

Q32. If α and β are zeroes of $x^2 - 4x + 1$, then find the value of $1/\alpha + 1/\beta - \alpha\beta$ is

<div align="center">OR</div>

If α, β are the zeroes of the polynomial
p(x) = $x^2 - 16$, then $\alpha\beta(\alpha + \beta)$

Q33. If α, β are zeroes of $x^2 - 6x + k$, what is the value of k if $3\alpha + 2\beta = 20$?

<div align="center">OR</div>

Find the value of 'k' such that the quadratic polynomial $3x^2 + (2k+1)x - (k+5)$ has the sum of zeroes as half of their product.

Q34. Find the zeroes of the quadratic polynomial $6x^2 - 3 - 7x$ and verify the relationship between the zeroes and the coefficient of the polynomial.

Q35. Find the quadratic polynomial, the sum of whose zeroes is 8 and their product is 12. Hence, find the zeroes of the polynomial.

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MORAL VALUES AND ETHICS

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1. Give water and bazra to the birds every day on roof of your home.
2. Help and take care of animals.
3. Pay attention to the cleanliness around the house, street of your house.
4. Help needy people they may be younger or elder than you with full of smile & pleasure.
5. Visit any tourist site near by your town and write a short description of your trip.
7. Tell stories to your elders and listened to stories from them.
8. Make a toy, make a model, make it yourself from out of garbage.
9. Keep yourself healthy do yoga, exercise, cycling, walk etc.
10. Learn a musical instrument.
11. Develop any one skill like cooking, serving, painting, pottery, carpentry, cycle repairing, app making etc.
12. Spend time with grandparents and take in there experiences.

Hindi

सूरदास के पद तथा नेताजी का चश्मा पाठों के महत्वपूर्ण प्रश्न तैयार करें |

पद परिचय विषय पढ़ने हेतु संज्ञा , सर्वनाम , विशेषण , क्रिया-विशेषण , क्रिया , वचन , कारक , लिंग आदि की परिभाषा , उदाहरण लिखिए तथा समझिए |

मार्केटिंग कंपनी मे सैल्समैन के पद हेतु एक स्ववृत तैयार कीजिए |

आपके शहर मे एक पुस्तक मेला प्रदर्शनी का आयोजन किया जा रहा है | इस संबंध मे एक विज्ञापन तैयार कीजिए |

बारिश के कारण आपके क्षेत्र की सड़कों मे जगह – जगह गड्डे हो गए हैं | अत: अपने नगर निगम अधिकारी को मरम्मत हेतु एक पत्र लिखिए |

Chemistry

Chapter 1

(a) Question and answers

(b) 20 chemical formulae

Chapter 2

Chemical formulae, preparation and uses of following salts

Bleaching powder

Plaster of paris

Washing soda

Baking soda

Baking powder

Class x physics holiday homework

Solve mirror related questions from

1. In text questions

2. Exercise

English

Make a File on
Reported Speech giving examples of -Statements
-Requests
-Questions
-Orders

and rules how to convert into Reported speech.
Write a letter enquiring about purchase of
   (a) musical instruments for your school
   (b) sports items like football, volleyball etc. for your school
   © Books for your school
     You are the head of the departments. Enquire about price, discount, mode of payment etc.
Write a letter placing an order for the purchase of
   (a) musical instruments for your school
   (b) sports items like football, volleyball etc. for your school
   © Books for your school
     Mention discount, mode of payment you are paying through, delivery dates. Place order as head of department.
4.What are the various Modals
   Give examples of Modals
5. Give examples of Subject Verb concord
6.Write analytical paragraphs on
Any three diagrams.
7. Solve all questions of " A Letter to God "
8. Solve atleast 2 passages.

संस्कृत

संधि

समास

समय को पुन:लेखन

5 पत्र

SOCIAL SCIENCE

Explain Absolutism?

Explain the concept of what is nation, by Ernst Renan?

State the causes and consequences of the treaty of Vienna?

State the social concept of Louise Otto Peters ?

Explain the effects and consequences of the treaty of Constantinople in detail?

Explain Nationalism and Imperialism?

Briefly describe the incident of Chauri – Chaura, 1922?

Explain the role of Mahatma Gandhi in the non-cooperation movement?

Discuss Indias role in the Khilafat movement?

Explain the utility of Silk Route(silk March)?

Write the consequences of the Great Depression of 1930?

Explain the contribution of Portuguese in printing revolution?