

ST. JOSEPH SCHOOL, AMBALA
CITY

CLASS IX HOLIDAYS HOMEWORK

ENGLISH

1) **Revise following grammar topics in Exammate practice book**

- a) Tenses
- b) Modals
- c) Prepositions
- d) Gap filling (pg.no. 193 to 201)

2) **Practice 5 unseen passage in Exammate Book. (pg.no. 6 to 11)**

3) **Practice following writing skills in notebook**

a) **Diary Entry:**

- i) When your parents cancelled summer vacations plans due to Corona Time.
- ii) How you planned new things to cook during lockdown.

b) **Story Writing (based on following moral):**

- i) No pain, No gain.
- ii) Never judge anyone by the way they look.

c) **Article Writing:**

- i) The Impact of Social Media on the Younger Generation.
- ii) The long term effects of COVID -19 on society.

Revise the syllabus so far covered in the class. Do the work neatly in a separate notebook.

SCIENCE

• Revise chapter – 1,5,14,15

• Practice following diagram

Plant and Animal Cell

Nitrogen Cycle, Carbon Cycle

- Maintain a Science dictionary in revision note book in which write the terms used in the form of words meaning.

MATHEMATICS

TOPIC: NUMBER SYSTEM

1. Visualize 3.756 on the number line, using successive magnification
2. Represent $\sqrt{3.5}$ on the number line
3. If $x = 3 + 2\sqrt{2}$, find the value of $x^2 + 1/x^2$.
4. If $x = 2 + \sqrt{5}$, prove that $x^2 + 1/x^2 = 18$.
5. Rationalise the denominator $1/(\sqrt{6} + \sqrt{5} - \sqrt{11})$
6. If $a = 9 - 4\sqrt{5}$, find the value of $a - 1/a$.
7. If $x = 0.125$, find the value of $(1/x)^{1/5}$.
8. If $x = 1$, find the value of $x^3 - 2x^2 - 7x + 5$
9. Find four rational numbers between $3/5$ and $4/5$
10. Find two irrational numbers lying between $\sqrt{2}$ and $\sqrt{3}$
11. Find two rational and irrational numbers between 0.3101 and 0.3222.
12. Simplify the following: a) $576^{1/2}$ b) $343^{1/3}$
13. Solve: a) $49 \times 7^x = (343)^{1/3}$
14. Evaluate: a) $125^{1/3} + 32^{1/5}$
c) $64^{2/3}$

Topic: Polynomials

Q.1 Factorize the following by splitting the middle term:

(a) $3x^2 + 11x + 30$ (b) $4x^2 - 13x + 10$

Q.2 Factorize the following by Factor theorem:

(a) $x^3 + 9x^2 + 23x + 15$ (b) $x^3 + 6x^2 + 11x + 6$

Q.3 Factorize the following by using a suitable identity:

(a) $4x^2 + 12xy + 9y^2$ (b) $2a^5 - 54a^2$ (c) $x^5 - x$ (d) $27x^3 - 135x^2 + 225x - 125$

Q.4 Evaluate the following using a suitable identity:

(a) 998^3 (b) $(10.2)^3$ (c) $(9.8)^3$

Q.5 If 5 is a zero of $x^3 + kx^2 + 2x + 8$ find k.

Q.6 If (x-2) is a zero of $x^3 - 4x^2 + kx - 8$ find k.

Q.7 If (x-2) and (x+3) are factors of $x^3 + ax^2 + bx - 30$, find a and b.

Q.8 If $x + y + z = 8$ and $xy + yz + zx = 20$ find the value of $x^3 + y^3 + z^3 - 3xyz$.

Q.9 If $a + b + c = 9$ and $a^2 + b^2 + c^2 = 35$ find the value of $a^3 + b^3 + c^3 - 3abc$.

Q.10 Find the value of $(2.7)^3 + (1.6)^3 + (-1.1)^3$ using a suitable identity.

Q.11 Factorize the following by using a suitable identity:

(a) $a^3 + b^3 - 8c^3 + 6abc$ (b) $(a/b)^3 + (b/c)^3 + (c/a)^3 - 3$ (c) $8x^3 - 27y^3 + 125z^3 + 90xyz$

Q.12 Find the value of $a^3 + 8b^3$ if $a + 2b = 10$ and $ab = 15$.

Q.13 Find the value of $a^3 - 27b^3$ if $a - 3b = -6$ and $ab = -10$

Q.14 Find the values of m and n if $y^2 - 1$ is a factor of $y^4 + my^3 + 2y^2 - 3y + n$.

Q.15 $(x + 2)$ is a factor of $mx^3 + nx^2 + x - 6$. It leaves the remainder 4 when divided by $(x - 2)$. Find m and n.

Q.16 The polynomials $kx^3 + 3x^2 - 3$ and $2x^3 - 5x + k$ leave the same remainder when divided by $(x - 4)$. Find k.

Q.17 If $ab + bc + ca = 10$ and $a^2 + b^2 + c^2 = 44$ find $a^3 + b^3 + c^3 - 3abc$.

Q.18 Show that x-2 is a factor $p(x) = x^3 - 12x^2 + 44x - 48$

Q.19 Factorize $x^3 - 2x^2 - 5x + 6$

Q.20 If $x + p$ is a factor of $p(x) = x^5 + p^2x^3 + 2x + p + 1$ find the value of p

Q.21 Factorize: (a) $a^2 + 1/a^2 + 2$ (b) $3(x+2)^2 + 17(x+2) + 10$ (c) $4x^2 - 9y^2 + 20x + 256$

TOPIC:

Probability

1. Three coins are tossed once, find the probability of getting at least one head
2. Three coins are tossed simultaneously 200 times with the following frequencies of different Outcomes:

Out comes	3 Heads	2 Heads	1 Head	No head
Frequency	23	72	77	28

Find the probability of getting: a) 2 Heads
b) at least 2 Heads

3. A dice is thrown once, find the probability of getting a prime number
4. A dice is thrown once. Find the probability of getting:
 - a) An even number
 - b) A prime number
 - c) A number greater than 4
5. A fair die is tossed once. Find the probability of getting:
 - a) a number more than or equal to 3
 - b) a multiple of 3
6. A letter of English alphabet is chosen at random. Calculate the probability that the letter
chosen is a 6 vowel

7. A bag contains 15 balls numbered 1 to 15. Find the probability of drawing a prime number,

When one ball is drawn from the bag at random

8. Marks obtained by 50 students in a class test of 100 marks are given below:

Marks	0 - 25	25 - 50	50 - 75	75 - 100
No of students	4	12	18	16

Find the probability that a student obtained less than 50% marks (

9. In one day international cricket match, a batsman played 40 balls. The runs scored as follows

Runs scored	0	1	2	3	4	6
No of balls	13	15	5	1	4	2

Find the probability that the batsmen will score:

- a) 6 runs

- b) A four or a six run
10. One number is chosen at random from numbers 1 to 100. Find the probability that it is

divisible by 4 or 6

11. In a survey of 80 people, 60 people like apple juice and remaining dislike it. Find the Probability that people dislike apple juice

12. 250 families with 2 children are selected randomly and following data were obtained:

Number of sons in family	2	1	0
Number of families	75	125	50

Find the probability of families having:

- a) 2 sons
b) 1 son
c) no son

13. 1500 family with 2 children were selected randomly and the following data was recorded:

Number of girls in family	2	1	0
Number of family	475	814	211

Compute probability of a family chosen at random having

- a) At most 1 girl
b) At least 2 girls
(

14. Probability of an impossible event is always.....

- a) 0 b) 1 c) 2 d) $\frac{1}{2}$

15. A die is thrown once. The probability of getting an even prime number is

- a) $\frac{1}{2}$ b) $\frac{1}{3}$ c) $\frac{1}{6}$ d) $\frac{2}{3}$

16. A coin is tossed once then probability of getting head is

- a) 2 b) 1 c) $\frac{1}{2}$ d) 3

17. There are 10 bulbs in a bag in which 4 bulbs are good and rest are fused, then the Probability of fused bulbs is

- a) $\frac{3}{5}$ b) $\frac{2}{5}$ c) 1 d) $\frac{2}{3}$

18. Sum of the probability of happening and not happening of an event is

- a) 1 b) 2 c) 0 d) none of these

19. The probability of winning a game is 0.3. Then, the probability of losing a game is

a) 0.3 b) 0.7 c) 0.6 d) 0.1

20. The Probability of a sure event is

a) 1 b) - 1 c) 0 d) none of these

21. Out of 35 students participating in a debate 10 are girls. The probability that winner is a boy is :

a) $\frac{1}{7}$ b) $\frac{3}{7}$ c) $\frac{4}{7}$ d) $\frac{5}{7}$

22. Which of the following cannot be the probability of an event

a) $\frac{1}{5}$ b) 0.3 c) 4% d) $\frac{5}{4}$

23. In a cricket match, a batsman hits a sixer 8 times out of 32 balls played. The probability that a sixer is not hit in a ball is :

a) 0.75 b) 0.25 c) - 0.25 d) 0.5

Maintain a mathematical dictionary in which write the following terminology in the form of word meaning: -

- | | |
|------------------------|-------------------------|
| 1.) Algorithm | 26.) Proper fraction |
| 2.) Angle | 27.) Quadrant |
| 3.) Arc | 28.) Quadratic equation |
| 4.) Axis | 29.) Quadrilateral |
| 5.) Binomial | 30.) Quotient |
| 6.) Chord | 31.) Radius |
| 7.) Cardinal number | 32.) Rational number |
| 8.) Constant | 33.) Real number |
| 9.) Decagon | 34.) Reciprocal |
| 10.) Equation | 35.) Recurring decimal |
| 11.) Graph | 36.) Remainder |
| 12.) Improper fraction | 37.) Reflex angle |
| 13.) Octagon | 38.) Rhombus |
| 14.) Octahedron | 39.) Scalar |
| 15.) Ordinal number | 40.) Scalene |
| 16.) Origin | 41.) Sector |
| 17.) Parallelogram | 42.) Semicircle |
| 18.) Perfect number | 43.) Tangent |
| 19.) Pi | 44.) Trapezium |
| 20.) Polygon | 45.) Union |
| 21.) Polyhedron | 46.) Value |
| 22.) Polynomial | 47.) Variable |
| 23.) Prime number | 48.) Venn diagram |
| 24.) Prism | 49.) Volume |
| 25.) Probability | 50.) Central Tendency |

Revise chapter 1,2 and 15 (NCERT) with examples

HINDI

निम्नलिखित प्रश्नों के उत्तर अपने पाठ्यक्रम में दिए पाठ के आधार पर **R.N.B** में लिखें ।

- 1 हर कोई लम्बे अरसे तक दुख क्यों नहीं मना सकता ?
- 2 'दुख का अधिकार' कहानी में धनी और निर्धन वर्ग के अंतर को बताने वाली घटनाओं का उल्लेख कीजिये।
- 3 एवरेस्ट पर चढ़ने के लिए कुल कितने कैंप बने गए ? उनका वर्णन कीजिए ।
- 4 एवरेस्ट यात्रा में ल्हाटू ने रेगुलेटर में क्या परिवर्तन किए ?
- 5 हमें उपवास तक जाना होगा - लेखक ने ऐसा क्यों कहा है?
- 6 रैदास की भक्ति किस प्रकार की है?
- 7 सुई और तलवार का प्रयोग क्या समझानेके लिए किया गया है ?
- 8 लेखक और अतिथि के बीच किन- किन विषयों पर चर्चा हुई ?
- 9 बात बिगड़ जाने पर पहले जैसी क्यों नहीं बन पाती ? उदाहरण देते हुए लिखिए ।
- 10 'पानी' शब्द का प्रयोग किन संदर्भों में आया है ?
- 11 क्या पशु -पक्षी अपने प्रति दर्शाए गए मानव प्रेम को समझते हैं? अपने विचार लिखिए।
- 12 सिद्ध किजिए कि गिल्लू लेखिका को बहुत प्यार करता था ।

प्र०:- निम्नलिखित लेखन कार्य को अपनी व्याकरण पुस्तिका में लिखिए ।

अनुच्छेद लेखन:-

- 1 मोबाइल फोन:सुविधा या असुविधा
- 2 सावधानी हटी , दुर्घटना घटी
3. डिजिटल होता इंडिया

संवाद लेखन:-

1. अपने क्षेत्र में फैली गंदगी के संबंध में क्षेत्र के स्वास्थ्य अधिकारी और क्षेत्र के निवासियों के बीच संवाद।
2. कोरोना से बचने के लिए देसी नुस्खों की आवश्यकता पर माँ -बेटे में संवाद।

☆व्याकरण पुस्तिका में पृष्ठ संख्या **70,71,82,83** पर दिए गए अभ्यास कार्य को व्याकरण उत्तर पुस्तिका में करें।

SOCIAL SCIENCE

☆ Do all worksheet questions in revision notebook

☆ learn syllabus done till now

☆ Do chapter reading for better understanding of source based questions.

☆ Make a Project File on Disaster Management

File description:-

page no1= Name

Class

Section

Topic

Page no2

Index

Page no3

Acknowledgement

Page no4

Definition of Disaster

Page 5

Types

Man -made

Natural

Page no6

Description of Natural disaster

Page no7

Description of Man made disaster

Page no 8

Case study : Cyclone Tauktae

page no 9

Case study: Covid 19 Natural or Man-Made

Worksheet

Q1)What is fixed capital?

Q2)What is multiple cropping?

Q3)What are the merits and demerits of Green Revolution?

Q4)Define Human Capital

Q5)What do you mean by referendum?

Q6)What was 'Legal Framework Order'?

Q7)What was PRI?

Q8)When did Zimbabwe attain independence?

Q9)Name the important passes located in Himalayas.

Q10)Which region is called 'Terai Region'?



FRONT OFFICE

Learn unit 1 (full)

Learn unit 2 (full)

En. Edu

Learn chapter 1,2 and 6
