

INDIAN SCHOOL NIZWA
DEPARTMENT OF MATHEMATICS
QUESTION PAPER PATTERN CLASS XI – XII

CLASS	TERM EXAMINATIONS	CYCLIC TESTS
XI & XII	SECTION A-1 MARK – 6 QUESTIONS SECTION B-4 MARKS – 13 QUESTIONS SECTION C-6 MARKS – 7 QUESTIONS TOTAL- 26 QUESTIONS & 100 MARKS	SECTION A - 1 MARK – 4 QUESTIONS SECTION B -4 MARKS – 5 QUESTIONS SECTION C-6 MARKS – 1 QUESTION TOTAL- 10 QUESTIONS & 30 MARKS

SAMPLE QUESTION PAPER
CLASS XI – XII

Time : 1 Hr.

Max. Marks : 30

SECTION A

I Answer the Following

(1 x 4 = 4)

1. Write the interval $[6,12)$ in set builder form

Ans: $I = \{x: x \in \mathbb{R}, 6 \leq x < 12\}$

(1)

SECTION B

II. Answer the Following.

(4 x 5= 20)

1. Prove That

Ans:- LHS=
$$\frac{\sin 5x - 2 \sin 3x + \sin x}{\cos 5x - \cos x} = \tan x$$

$$= \frac{\cos 5x - \cos x}{\sin 5x + \sin x - 2 \sin 3x} \quad \left(\frac{1}{2}\right)$$

$$= \frac{\cos 5x - \cos x}{2 \sin 3x \cdot \cos 2x - 2 \sin 3x} \quad (1)$$

$$= \frac{-2 \sin 3x \cdot \sin 2x}{\sin 3x(\cos 2x - 1)} \quad \left(\frac{1}{2}\right)$$

$$= \frac{-\sin 3x \cdot \sin 2x}{1 - \cos 2x} \quad \left(\frac{1}{2}\right)$$

$$= \frac{\sin 2x}{2 \sin^2 x} \quad (1)$$

$$= \frac{\sin 2x}{2 \sin x \cos x} \quad \left(\frac{1}{2}\right)$$

$$= \tan x$$

SECTION C

III. Answer the Following .

(6 x 1= 6)

1) In a survey of 60 people it was found that 25 people read newspaper H , 26 read newspaper T, 26 read newspaper I, 9 read both H and I , 11 read both Hand T, 8 read both T and I , 3 read all the 3 newspapers.

Find i. Number of people who read at least one newspaper
ii. Number of people who read exactly one newspaper.

Ans:- $n(H \cup T \cup I) = n(H) + n(T) + n(I) - n(H \cap T) - n(T \cap I) - n(H \cap I) + n(H \cap T \cap I)$ (1 ½)
 $n(H) = 25, n(T) = 26, n(I) = 26$ (1)

$n(H \cap I) = 9, n(H \cap T) = 11, n(T \cap I) = 8$ (1)

$n(H \cap T \cap I) = 3$ (½)

- i) 52
ii) 30

- (1)
(1)

QUESTION PAPER PATTERN
CLASS VI –X

CLASS	TERM EXAMINATIONS	CYCLIC TESTS
IX & X	SECTION A-1 MARK – 4 QUESTIONS SECTION B-2 MARKS – 6 QUESTIONS SECTION C-3 MARKS – 10 QUESTIONS SECTION D-4 MARKS- 11 QUESTIONS TOTAL- 31 QUESTIONS & 90 MARKS	SECTION A-1 MARK – 3 QUESTIONS SECTION B -2 MARKS – 3 QUESTIONS SECTION C -3 MARKS – 3 QUESTIONS SECTION D -4 MARKS- 3 QUESTIONS TOTAL- 12 QUESTIONS & 30 MARKS
VI - VIII	SECTION A-1 MARK – 4 QUESTIONS SECTION B-2 MARKS – 7 QUESTIONS SECTION C-3 MARKS – 6 QUESTIONS SECTION D-4 MARKS- 6 QUESTIONS TOTAL- 23 QUESTIONS & 60 MARKS	

SAMPLE QUESTION PAPER
CLASS-VI –X

Time : 1 Hr.

Max. Marks : 30

SECTION-A : (3X1=3)

Eg. $\left(\frac{1}{2}\right)^{-2} = \underline{\hspace{2cm}}$
 Steps: $= 2^2$ ----- ½ mark
 $= 4$ ----- ½ mark

SECTION-B: (3 X 2 = 6)

EG: Find any 5 rational numbers between $\frac{3}{7}$ and $\frac{1}{9}$

steps: Taking l.c.m=63----- ½ mark

$$\left. \begin{array}{l} \frac{3}{7} \text{ ---- } \frac{3 \times 9}{7 \times 9} = \frac{27}{63} \\ \frac{1}{9} \text{ ---- } \frac{1 \times 7}{9 \times 7} = \frac{7}{63} \end{array} \right\}$$



Choose and write any five rational numbers between $\frac{7}{63}$ and $\frac{27}{63}$ ----- ½ mark

SECTION-C : (3 X 3 = 9)

EG: find m so that $(-3)^{m+1} \times (-3)^5 = (-3)^7$

Steps: $(-3)^{m+1+5} = (-3)^7$ ----- 1 mark
 $(-3)^{m+6} = (-3)^7$ ----- 1 mark
 $m+6=7$ ----- ½ mark
 $m=1$ ----- ½ mark

SECTION-D: (4 X 3 = 12)

EG: $\frac{3^{-5} \times 10^{-5} \times 125}{(5)^{-7} \times (6)^{-5}}$

Steps: $\frac{\left(\frac{1}{3}\right)^5 \times \left(\frac{1}{10}\right)^5 \times 125}{\left(\frac{1}{5}\right)^7 \times \left(\frac{1}{6}\right)^5}$ -----1 mark

$$\frac{1 \times 1 \times 125 \times 5^7 \times 6^5}{3^5 \times 10^5} \text{----- 1 mark}$$

$$\frac{5^3 \times 5^7 \times 3^5 \times 2^5}{3^5 \times 2^5 \times 5^5} \text{----- 1 mark}$$

Cancellation ----- 1/2 mark
mark

After cancellation we get ans : 5^5 ----- 1/2

QUESTION PAPER PATTERN

CLASS I - V

CLASS	TERM EXAMINATIONS	CYCLIC TESTS
I - V	FILL IN THE BLANKS – 6 X 1 = 6 MARKS MULTIPLE CHOICE – 6 X 1 = 6 MARKS MATCH THE FOLLOWING – 4 X 1 = 4 MARKS TRUE/ FALSE – 4 X 1 = 4 MARKS SECTION A-VERY SHORT ANSWER TYPE- 5 X 1 = 5 MARKS SECTION B-SHORT ANSWER TYPE – 5 X 2 = 10 MARKS SECTION C -LONG ANSWER TYPE – 5X3 = 15 MARKS TOTAL-35 QUESTIONS & 50 MARKS	FILL IN THE BLANKS – 5X 1 = 5 MARKS MULTIPLE CHOICE – 5 X 1 = 5 MARKS SECTION A-VERY SHORT ANSWER TYPE- 5 X 1 = 5 MARKS SECTION B-SHORT ANSWER TYPE – 3 X 2 = 6 MARKS SECTION C-LONG ANSWER TYPE – 3X3 = 9 MARKS TOTAL-21 QUESTIONS & 30 MARKS

SAMPLE QUESTION PAPER

CLASS I -II

TIME: 1 HR

MM : 30

NAME:

CLASS:

DATE: / /

I) Fill in the blanks: (1 x 5 = 5)
 1) The place value of 2 in 729 is _____.

Answer: 20

II) Choose the correct answer from the given brackets: (1 x 5 = 5)

2) The number for 'Eight hundred fourteen' is _____.
 (840 , 814 , 804)

Answer: 814

SECTION -A (1 x 5 = 5)

III) Answer the following questions: (very short answer)

3) Write the expanded form of the number '280'.

Answer: 2 hundreds+ 8 tens

SECTION - B (2 x 3 = 6)

IV) Answer the following questions.(short answer)

4) Write the number names and its place value of the number 456.

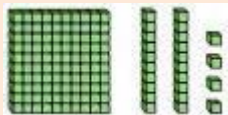
ANSWER: Four hundred fifty-six.

H	T	O
4	5	6

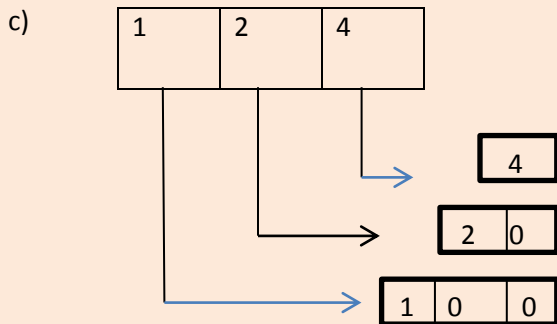
SECTION -C (3 x 3 = 9)

V) Answer the following. (long answer)

5) Count e blocks. Write the number, number name and place value.



Answer: a) Number : 124
 b) Number Name : One hundred twenty – four



SAMPLE QUESTION PAPER
CLASS III -V

TIME: 1 HR

MM :30

NAME:

CLASS:

DATE: / /

I. Fill in the blanks: (5 × 1 = 5)

1. Compare using >, <, or =

5, 87, 90, 456 5, 78, 23, 567

Ans: 5, 87, 90, 456>..... 5, 78, 23, 567

II. Choose the correct answer from the following options: (5 × 1 = 5)

2. How many 6 – digit numbers are there in all?

- a. 900 b. 9,000 c. 90, 000 d. 9,00,000

Ans: 9, 00, 000

III. Answer the following questions: (very short answer) (5 × 1 = 5)

3. Give the number before:

- a. 45, 69, 500

Ans: The number before 45, 69, 500 is 45, 69, 499.

IV. Answer the following questions: (short answer) (3 × 2 = 6)

4. Make the smallest and the greatest possible 7 – digit number by repeating the digits.

5, 8, 2, 9, 1. Use all the digits at least once.

Ans: The smallest possible 7 – digit number is 11, 12, 589

The greatest possible 7 – digit number is 99, 98, 521

V. Answer the following questions: (long answer) (3 × 3 = 9)

5. Insert commas; give the word form and the expanded form according to the Indian system.
 98310809

Ans: 9, 83, 10, 809

Word form: Nine crore eighty three lakh ten thousand eight hundred nine.

Expanded form: 9, 83, 10, 809 = 9, 00, 00, 000+80, 00, 000 + 3, 00, 000+ 10, 000 + 0+800+0+9