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FOR MAHARASHTRA BOARD (MSBSHSE) CLASS 10 EXAM PREPARATION

Maharashtra Board (MSBSHSE) Class 10 2026 June Session Question Paper · Maths Part 1 (Algebra)

EXAM
Maharashtra Board (MSBSHSE) Class 10

YEAR
2026

TYPE
June Session Question Paper

SUBJECT
Maths Part 1 (Algebra)

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DATE : 22/06/2026 **SUBJECT : MATHEMATICS (71)** ALGEBRA—PART I (E)

TIME : 11.00 SYLLABUS : (REVISED COURSE)

DURATION : **2** Hours TOTAL PAGES : **4** TOTAL MARKS : **40**

Note :— (*i*) *All* questions are compulsory.
(*ii*) Use of a calculator is not allowed.
(*iii*) The numbers to the right of the questions indicate full marks.
(*iv*) In case of MCQs [Q. No. **1(A)**] only the first attempt will be evaluated and will be given credit.

1. (A) Four alternative answers for each of the following sub-questions are given. Choose the correct alternative and write it : **4**

(*i*) For solving the simultaneous equations $x + y = 3$, $3x - 2y = 4$. Find the value of determinant D.
(*a*) 5 (*b*) 1
(*c*) –5 (*d*) –1

(*ii*) One of the roots of equation $x^2 + mx - 5 = 0$ is 2, find the value of m.
(*a*) –2 (*b*) $-\frac{1}{2}$
(*c*) $\frac{1}{2}$ (*d*) 2

(*iii*) Rate of GST on brokerage is ..... .
(*a*) 5% (*b*) 18%
(*c*) 12% (*d*) 28%

(*iv*) The classification of persons based on blood groups is to be shown by a pie diagram. The persons having blood group O are 40%. What should be the measure of angle for the persons having O blood group ?
(*a*) 114° (*b*) 140°
(*c*) 104° (*d*) 144°

(B) Solve the following sub-questions : **4**

(*i*) If $15x + 17y = 21$ and $17x + 15y = 11$, then find the value of $x + y$.
(*ii*) Find the first term and common difference of the given A.P. 5, 1, –3, –7, ...
(*iii*) Two coins are tossed simultaneously. Write the sample space (S) and the number of sample points $n(S)$.
(*iv*) Find Mean $(\bar{X})$ if $\sum x_i f_i = 1265$ and $\sum f_i = 50$.

2. (A) Complete and rewrite any *two* activities from the following : **4**

(*i*) Complete the following table to draw the graph of equation $x - y = 1$.

Activity :

x	0	☐	☐
y	☐	0	–3
(x, y)	(0, –1)	☐	(–2, –3)

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(*ii*) Complete the following table by writing suitable numbers and words.

Activity :

Sr. No.	FV	Share is at	MV
(1)	₹ 100	Par	₹ ☐
(2)	₹ ☐	Premium ₹ 500	₹ 575
(3)	₹ 10	☐	₹ 5
(4)	₹ 300	☐	₹ 310

(*iii*) Complete the following activity to find the probability of getting tail when one coin is tossed.

Activity :

Let 'S' be the sample space.

S = {H, T}

$n(S)$ = ☐

Let A be the event of getting tail.

A = {☐}

$\therefore$ $n(A)$ = ☐

$P(A) = \frac{n(A)}{n(S)}$

P(A) = ☐

(B) Solve any ***four*** **sub-questions from the following :** **8**

(*i*) Solve the following simultaneous equations :

$5x + 3y = 9;\ 2x - 3y = 12$

(*ii*) Form the quadratic equation whose roots are 3 and –10.

(*iii*) 'Pawan Medical' supplies medicines. On some medicines the rate of GST is 12%, then what is the rate of CGST and SGST ?

(*iv*) Solve the following quadratic equation by factorisation method :

$25\,m^2 = 9$

(*v*) If one die is rolled, then write the sample space (S), $n(S)$, event A in the set form and $n(A)$.

Event A : getting odd number on the upper face.

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3. (A) Complete and rewrite any *one* activity from the following : **3**

(*i*) M/s. Jay Chemicals purchased a liquid soap having taxable value ₹ 8,000 and sold it to the consumers for the taxable value ₹ 10,000. Rate of GST is 18%. Find the CGST and SGST payable by M/s. Jay Chemicals.

Activity :

Input Tax = 18% of 8000

$= \frac{\square}{100} \times 8000$

= ₹ ☐

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$\therefore$ ITC = ₹ 1440

Output Tax = 18% of 10,000

$= \frac{18}{100} \times$ [ ]

= ₹ [ ]

$\therefore$ GST payable = Output tax – [ ]

= [ ] – 1440

= ₹ 360

$\therefore$ Payable CGST = ₹ 180 and Payable SGST = ₹ 180 by M/s. Jay Chemicals.

(*ii*) Complete the following activity to find, 'how many three digit natural numbers which are divisible by 5'.

Activity :

Three digit natural numbers divisible by 5 are as follows :

100, 105, 110, ..., 995.

t_n = [ ], a = [ ], $d = 5$, n = ?

$t_n = a + (n - 1)\,d$ ..... formula

995 = [ ] + $(n - 1) \times$ [ ]

$895 = (n - 1) \times 5$

$\frac{895}{5} = n - 1$

[ ] + 1 = n

[ ] = n

$\therefore$ There are 180 three digit natural numbers, divisible by 5.

(B) Solve any *two* sub-questions from the following : **6**

(*i*) Solve the following simultaneous equations by Cramer's rule :

$x + 2y = -1; \quad 2x - 3y = 12$

(*ii*) Solve the following quadratic equation by formula method :

$x^2 - 3x - 2 = 0$

(*iii*) Electricity used by some families is shown in the following table. Find the mode of electricity used.

Use of Electricity (Units)	0—20	20—40	40—60	60—80	80—100	100—120
No. of Families	13	50	70	100	80	17

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(*iv*) A two digit number is formed using digits 2, 3, 5, 7, 9 without repetition. What is the probability that the number formed is :

(*a*) an odd number.

(*b*) a multiple of 5.

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4. Solve any *two* sub-questions from the following : **8**

(*i*) The following table shows the classification of percentages of marks of students and the number of students. Draw a frequency polygon from the table.

Result (Percentage)	30—40	40—50	50—60	60—70	70—80	80—90	90—100
No. of Students	7	33	45	65	47	18	5

(*ii*) The sum of the squares of five consecutive natural numbers is 1455. Find the numbers.

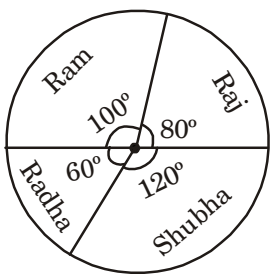
(*iii*) Ajay Sharma repays the borrowed amount of ₹ 3,25,000 by paying ₹ 30,500 in the first month and then decreases the payment by ₹ 1,500 every month. How long will it take to clear his amount ?

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5. Solve any *one* sub-question from the following : **3**

(*i*) If the point (2, 1) lies on the graph of the equation $x + ay = 4$, then find the value of 'a' and draw the graph of the equation so obtained.

(*ii*) The following pie diagram represents the number of valid votes obtained by four students; who contested for school captain. The total of valid votes polled was 720.



Answer the following questions :

(*a*) Who has won the election ?

(*b*) What is the minimum number of votes ? Who got it ?

(*c*) By how many votes did the winner defeat the nearest contestant ?
