

TEST NO. 7

SYLLABUS FULL BOOK
MATHEMATICS (SCIENCE)
TIME ALLOWED: 15 Min

2020-(9TH CLASS)

PAPER: (OBJECTIVE TYPE)
Marks: 15

Note: Four possible answers A, B, C and D to each question are given. The choice which you think is correct fill that circle in front of that question with marker or Pen ink in the answer-book. Cutting or filling two or more circle will result in zero mark in that question.

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- 1.1- If $\begin{bmatrix} 2 & 6 \\ 3 & x \end{bmatrix} = 0$ then x is equal to.
(A) 0 (B) -6 (C) 6 (D) -9
2. Write $4\frac{2}{3}$ with radical sign.
(A) $\sqrt[3]{4^2}$ (B) $\sqrt{4^2}$ (C) $\sqrt[2]{4^3}$ (D) $\sqrt{4^6}$
3. If $y = \log_z x$ then _____:
(A) $x^y = z$ (B) $y^z = x$ (C) $Z^y = x$ (D) $x^z = y$
4. $(\sqrt{a} + \sqrt{b})(\sqrt{a} - \sqrt{b})$
(A) $a^2 + b^2$ (B) $a^2 - b^2$ (C) $a + b$ (D) $a - b$
5. Find m so that $x^2 + 4x + m$ is a complete square.
(A) 8 (B) -8 (C) 16 (D) 4
6. H.C.F. of $(x - 2)$ and $(x^2 + x - 6)$ is:
(A) $x^2 + x - 6$ (B) $x + 3$ (C) $x - 2$ (D) $x + 2$
7. Solution of set of $-2 < x < 3/2$ is.
(A) -5 (B) 0 (C) 3 (D) 3/2
8. If $(x - 1, y + 1) = (0, 0)$ then (x, y) is:
(A) (1, -1) (B) (1, 1) (C) (-1, -1) (D) (-1, 1)
9. Which ordered pair satisfies the equation $y = 2x$
(A) (0, 1) (B) (2, -2) (C) (2, 1) (D) (1, 2)
11. Mid-point of the points (2, -2) and (-2, 2) is.
(A) (2, 2) (B) (-2, -2) (C) (0, 0) (D) (1, 1)
12. Any triangle has ___ right angles.
(A) Right angle (B) Acute angle (C) Supplementary angles (D) None of these
13. In parallelogram opposite sides are.
(A) Congruent (B) Opposite (C) Parallel (D) None- congruent
14. Bisection means to divide into _____ equal parts.
(A) 4 (B) 3 (C) 2 (D) None
15. One angle on the base of an isosceles triangle is 30° what is the measure of its vertical angle is.
(A) 30° (B) 120° (C) 60° (D) 90°

	A	B	C	D		A	B	C	D		A	B	C	D		A	B	C	D					
1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	7	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	10	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	13	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	11	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	14	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	9	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	15	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

نوٹ: معروضی سوال نامے کو توجہ سے پڑھیں اور ہر MCQ کی درست آپشن A, B, C, D کو بچپن کی سی ایسا یا باہر کر کے اس طرح چمکے گرین کہ سیاہی دائرے سے باہر نہ نکلے۔ ایک سے زیادہ دائروں کو چمکے کرنے یا کاٹ کر نہ کرنے کی صورت میں مذکورہ جواب غلط تصور ہوگا۔

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TEST NO. 7

SYLLABUS:- FULL BOOK
MATHEMATICS (SCIENCE)
Time Allowed: 2:10 hours

2020-(9TH CLASS)

Paper: (Essay Type)
Maximum. Marks: 60

(PART – I)

2. Write short answer to any SIX (6) questions:

12

(i) Two sides of a rectangle differ by 3.5cm. Find the dimensions of the rectangle if its perimeter is 67cm.

(ii) Define symmetric and skew symmetric matrix.

(iii) Represent $\sqrt{3}$ on number line.

(iv) Simplify:
$$\sqrt{\frac{(216)^{2/3} \times (25)^{1/2}}{(.04)^{-1/2}}}$$

(v) Prove:
$$\log_a n = \frac{\log_b n}{\log_b a}$$

(vi) Express $\log x - 2 \log x + 3 \log(x+1) - \log(x^2 - 1)$ as a single logarithm.

(vii) Find product, using formula.

$$(x - y)(x + y)(x^2 + y^2)(x^2 + xy + y^2)(x^2 - xy + y^2)(x^4 - x^2y^2 + y^4)$$

(viii) If $x = 2 + \sqrt{3}$, find value of $\left(x - \frac{1}{x}\right)$.

(ix) Factorize: $-x^2 + 6x + 9 - 4y^2$.

3. Write short answer to any SIX (6) questions:

12

(i) If $A = \frac{a+1}{a-1}$, then find $A - \frac{1}{A}$.

(ii) Solve: $-1 - 2x < 5 - x \leq 25 - 6x$.

(iii) Solve: $-\frac{1}{2}\left(x - \frac{1}{6}\right) + \frac{2}{3} = \frac{5}{6} + \frac{1}{3}\left(\frac{1}{2} - 3x\right)$.

(iv) Find value of 'm' and 'c' by expressing in the form. $y = mx + c$, $2x + 3y - 1 = 0$.

(v) Verify whether $(5, 3)$ and $(2, 5)$ lies on line $2x - y + 1 = 0$.

(vi) Let P be the point on x-axis with x-coordinate 'a' and Q be the point on y-axis with y-coordinate 'b' as given. Find distance between P and Q. $a = \sqrt{2}$, $b = 1$

(vii) Separate real and imaginary parts of $(-1 + \sqrt{-2})^2$.

(viii) What is S.A.S Postulate?

(ix) What is Pythagoras' Theorem?



4. Write short answer to any SIX (6) questions:

12

- (i) Define bisector of an angle and bisector of a line segment.
- (ii) In the $\triangle ABC$, $m\angle B = 70^\circ$ and $m\angle C = 45^\circ$. Which of the sides of triangle is longest and which is the shortest?
- (iii) In $\triangle ABC$, $\overline{DE} \parallel \overline{BC}$, $\overline{AD} = 2.4\text{cm}$, $\overline{AE} = 3.2\text{cm}$, $\overline{EC} = 4.8\text{cm}$ find \overline{AB} .
- (iv) What is Triangular Region?
- (v) Construct a right-angled triangle measure of whose hypotenuse is 5cm and one side is 3.2cm.
- (vi) Define Orthocenter and Point of concurrency.
- (vii) Define Altitude or Height of the Parallelogram.
- (viii) Measure of sides of triangle are $a = 1.5\text{cm}$, $b = 2\text{cm}$, $c = 2.5\text{cm}$. Verify it is a right-angle triangle.
- (ix) Define conditional equation.

(PART – II)

Note: Attempt any THREE questions, but Question 9 is compulsory.

5. (a) Two cars are 600 km apart are moving towards each other. Their speed differs by 4 $\frac{1}{2}$ 6 km per hour and cars are 123 km apart after $4\frac{1}{2}$ hours. Find speed of each car. 4
- (b) Solve for real 'x' and 'y'. $(3 - 2i)(x + yi) = 2(x - 2yi) + 2i - 1$ 4
6. (a) Use log tables to solve $\sqrt[3]{\frac{0.07921 \times (18.99)^2}{(5.79)^4 \times 0.9474}}$ 4
- (b) Simplify: $\frac{6}{2\sqrt{3} - 6} + \frac{\sqrt{6}}{\sqrt{3} + \sqrt{2}} - \frac{4\sqrt{3}}{\sqrt{6} - \sqrt{2}}$ 4
7. (a) The remainder after dividing the polynomial $P(x) = x^3 + ax^2 + 7$ by $(x+1)$ is $(b+5)$ 4
2b. Calculate the value of 'a' and 'b' if this expression leaves a remainder of $(b+5)$ on being divided by $(x-2)$
- (b) To make the expression $9x^4 - 12x^3 + 22x^2 - 13x + 12$ square. 4
(i) What should be added to it?
(ii) What should be subtracted from it?
(iii) What should be the value of 'x'?
8. (a) Solve and check: $\sqrt{x+7} + \sqrt{x+2} = \sqrt{6x+13}$ 4
(b) Construct a triangle having base 5cm and other sides equal to 5cm and 6cm. 4
Construct a square equal in area to given Δ triangle.
9. Triangles on equal bases and of equal altitudes are equal in area. Prove. 8

OR

Any point equidistant from the end points of a line segment is on the right bisector of it. Prove.