

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, MULTAN.
OBJECTIVE KEY FOR INTERMEDIATE 1st ANNUAL EXAMINATION, 2026

(New)

Name of Subject: Mathematics - Part I

Group: I

Q. Nos	Paper Code	Correct Answer	Paper Code	Correct Answer	Paper Code	Correct Answer	Paper Code	Correct Answer
	2191		2193		2195		2197	
1	B	2	C	0	D	8 th At	A	24
2	D	3	B	5	A	2	B	5
3	C	6m ²	A	$\sqrt{7}$	B	5+3 $\sqrt{2}$	C	2 $\sqrt{2}$
4	A	(0,0)	B	6	C	6	A	-cos θ
5	C	5	C	1	D	120	D	Even
6	D	8 th At	B	2	A	24	C	0
7	A	2	D	3	B	5	B	5
8	B	5+3 $\sqrt{2}$	C	6m ²	C	2 $\sqrt{2}$	A	$\sqrt{7}$
9	C	6	A	(0,0)	A	-cos θ	B	6
10	D	120	C	5	D	Even	C	1
11	A	24	D	8 th At	C	0	B	2
12	B	5	A	2	B	5	D	3
13	C	2 $\sqrt{2}$	B	5+3 $\sqrt{2}$	A	$\sqrt{7}$	C	6m ²
14	A	-cos θ	C	6	B	6	A	(0,0)
15	D	Even	D	120	C	1	C	5
16	C	0	A	24	B	2	D	8 th At
17	B	5	B	5	D	3	A	2
18	A	$\sqrt{7}$	C	2 $\sqrt{2}$	C	6m ²	B	5+3 $\sqrt{2}$
19	B	6	A	-cos θ	A	(0,0)	C	6
20	C	1	D	Even	C	5	D	120
Cross Check	A B C D		A B C D		A B C D		A B C D	
Total	5564		5564		5564		5564	

برقیکیٹ بابت صحیح سوالیہ پرچہ مارکنگ Key

ہم نے مضمون ریاضی پرچہ I گروپ I انٹرمیڈیٹ پہلا سالانہ امتحان 2026 کا سوالیہ پرچہ (Subjective & Objective) کو منظر عمیق چیک کر لیا ہے یہ پرچہ Syllabus کے عین مطابق Set کیا گیا ہے۔ اس سوالیہ پرچہ میں کسی قسم کی کوئی غلطی نہ ہے۔ ہم نے سوالیہ پرچہ کا اردو اور انگریزی Version بھی چیک کر لیا ہے۔ یہ Version آپس میں مطابقت رکھتے ہیں۔ نیز اس پرچہ کی معروضی (MCQs) Key کی بابت تصدیق کی جاتی ہے کہ اس میں بھی کسی قسم کی کوئی غلطی نہ ہے۔ مزید یہ کہ ہم نے Key بنانے سے متعلق دفتر کی جانب سے تیار کردہ ہدایات وصول کر کے ان کا بغور مطالعہ کر لیا ہے اور ان کی روشنی میں Key بنائی ہے۔ نیز سب ایگزامینرز کیلئے تفصیلی مارکنگ ہدایات / مارکنگ اسکیم / Rubrics بھی تیار کر دی گئی ہیں۔

Prepared & Checked By:

Dated: 22-06-26

S.#	Name	Designation	Institution	Mobile No	Signature
1	Hafiz M. IRSHAD	A.P	Gant Graduate College Civil	03007331974	
2	Khurram Shahzad	A.P	G.C.Civil Lines Multan	03216343020	
3	M. Arif	A.P	G.C.C of Science Multan	0300-8682996	
4	HAR NAWAR	SSS	G.H.S.S Lar Multan	03007187136	
5	M. Adnan Anwar	A.P	G.W.H.T. College, Multan	03047060319	

Re-Checked By: ہم نے درج بالا سوالیہ پرچہ (انشائیہ + معروضی) معروضی "Key" اور ہدایات کے حوالہ سے مکمل طور پر چکی کر لی ہے۔ کسی قسم کی غلطی نہ ہے۔

1	Uzma Aighar	Principal	G.C.W Ch#14 Multan	03027492400	
2	DR. M. JAVED AHAR	SSS	G.H.S.S 138/10-R	03226171679	

23-06-26

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, MULTAN.
OBJECTIVE KEY FOR INTERMEDIATE 1st ANNUAL EXAMINATION, 2026

(New)

Name of Subject: Mathematics Part-I Group: II

Q. Nos	Paper Code 2192	Correct Answer	Paper Code 2194	Correct Answer	Paper Code 2196	Correct Answer	Paper Code 2198	Correct Answer
1	B	5	D	24	A	-7	C	0
2	D	1/3	B	$\pm i$	B	an Identity	B	4
3	C	-1	C	-Cot	F	C	A	$2\sqrt{2}$
4	A	{4,5}	D	Tan	C	42	B	2
5	D	3x3	A	3 π	A	420	D	2/2
6	A	-7	C	0	D	24	B	5
7	B	an Identity	B	4	B	$\pm i$	D	1/3
8	F	C	A	-2 π^2	C	-Cot	C	-1
9	C	42	B	2	D	Tan	A	{4,5}
10	A	420	D	2/2	A	3 π	D	3x3
11	D	24	B	5	C	0	A	-7
12	B	$\pm i$	D	1/3	B	4	B	an Identity
13	C	-Cot	C	-1	A	2 π^2	F	C
14	D	Tan	A	{4,5}	B	2	C	42
15	A	3 π	D	3x3	D	2/2	A	420
16	C	0	A	-7	B	5	D	24
17	B	4	B	an Identity	D	1/3	B	$\pm i$
18	A	-2 π^2	F	C	C	-1	C	-Cot
19	B	2	C	42	A	{4,5}	D	Tan
20	D	2/2	A	420	D	3x3	A	3 π
Cross Check	A B C D		A B C D		A B C D		A B C D	
Total	5545		5545		5545		5545	

سرٹیفیکٹ بابت سوائے پرچہ مارکنگ Key

(New) سوائے

ہم نے انٹرمیڈیٹ اور سیکنڈری (Subjective & Objective) کو مدنظر عین چیک کر لیا ہے یہ پرچہ Syllabus کے عین مطابق Set کیا گیا ہے۔ اس سوائے پرچہ میں کسی قسم کی کوئی غلطی نہ ہے۔ ہم نے سوائے پرچہ کا اردو اور انگریزی Version بھی چیک کر لیا ہے۔ یہ Version آپس میں مطابقت رکھتے ہیں۔ نیز اس پرچہ کی معروفی (MCQs) Key کی بابت تصدیق کی جاتی ہے کہ اس میں بھی کسی قسم کی کوئی غلطی نہ ہے۔ مزید یہ کہ ہم نے Key بنانے سے متعلق دفتر کی جانب سے تیار کردہ ہدایات وصول کر کے ان کا بغور مطالعہ کر لیا ہے اور ان کی روشنی میں Key بنائی ہے۔ نیز سب ایگزامینرز کیلئے تفصیلی مارکنگ ہدایات / مارکنگ سکیم / Rubrics بھی تیار کر دی گئی ہیں۔

Prepared & Checked By:

Dated: 22-06-26

S.#	Name	Designation	Institution	Mobile No	Signature
1	M. Adnan Anwar	A.P	Goyt. Wilayat Hassan Islamia Graduate College Multan	03047060319	Adnan Anwar
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4	M. Anif	A.P	G.C.C of Service Nulla	0300-8682986	M. Anif
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Re-Checked By: ہم نے درج بالا سوائے پرچہ (انشائیہ + معروفی) معروفی "Key" اور ہدایات کے حوالہ سے مکمل طور پر تلی کر لی ہے۔ کسی قسم کی کوئی غلطی نہ ہے۔

1	Dr. F. Sghar	Principal	G.G.C.W Ch#14 Multan	0302-7492400	Dr. F. Sghar
2	DR. M. TAJED AZHAR	SSS	G.H.S.S 138/10-R	03226171679	DR. M. TAJED AZHAR

23-06-26

INTERMEDIATE PART-I (11 th Class)		2026 (1 st -A)	Roll No:
MATHEMATICS (NEW COURSE) PAPER-I		GROUP-I	
TIME ALLOWED: 2.30 Hours		SUBJECTIVE	
		MAXIMUM MARKS: 80	
NOTE: Write same question number and its parts number on answer book, as given in the question paper.			
SECTION-I			
2. Attempt any eight parts.			8 × 2 = 16
(i)	Separate into real and imaginary parts $\frac{2-7i}{4+5i}$		
(ii)	If $z_1 = 4 + 5i$ and $z_2 = \alpha - 2i$, find real values of α such that $\text{Re}(z_1 z_2) = 20$		
(iii)	Factorize $z^2 - 2iz - 1$	(iv)	Evaluate $\left(\frac{-1+\sqrt{-3}}{2}\right)^7 + \left(\frac{-1-\sqrt{-3}}{2}\right)^7$
(v)	Given that $f(x) = \sqrt{2x+3}$, find $f(x-2)$	(vi)	Find the domain and the range of the function $g(x) = 5 - x$
(vii)	Solve the absolute value equation $ x^2 + 1 = 5$	(viii)	Solve $\frac{x}{x+1} + \frac{x+1}{x} = \frac{5}{2}$; $x \neq 0$, $x \neq -1$
(ix)	If $A = [a_{ij}]_{3 \times 4}$, then show that $I_3 A = A$	(x)	Without expansion, show that $\begin{vmatrix} \ell & m+n & 1 \\ m & n+\ell & 1 \\ n & \ell+m & 1 \end{vmatrix} = 0$
(xi)	If 'A' is a square matrix of order '3' then show that $ kA = k^3 A $		
(xii)	Resolve $\frac{7x+25}{(x+3)(x+4)}$ into partial fractions.		
3. Attempt any eight parts.			8 × 2 = 16
(i)	Write down the first three terms of the sequence $a_{n+1} = 4a_n - 7$ and $a_1 = 3$		
(ii)	Which term of the A.P. 3, 8, 13, ---- is 123?		
(iii)	Find S_n for arithmetic series $a_1 = 40$, $n = 20$, $d = -3$	(iv)	Find G.M. between $-2i$ and $8i$.
(v)	Write $n(n-1)(n-2) \dots (n-r+1)$ in the factorial form.		
(vi)	In how many ways can 8 keys be arranged in a circular key ring?	(vii)	If ${}^nC_2 : {}^nC_2 = 15:1$, find n .
(viii)	Use the remainder theorem to find the remainder when $x^3 + 5x^2 + 6$ is divided by $x+1$		
(ix)	When the polynomial $x^3 + x^2 + x + k$ is divided by $x+1$, the remainder is 7. Find the value of k .		
(x)	Prove that $\sin(180^\circ + \alpha) \sin(90^\circ - \alpha) = -\sin \alpha \cos \alpha$		
(xi)	Prove that $\sin(45^\circ + \alpha) = \frac{1}{\sqrt{2}}(\sin \alpha + \cos \alpha)$	(xii)	Express $\sin 5x + \sin 7x$ as a product.
4. Attempt any nine parts.			9 × 2 = 18
(i)	Find the period of $6 - 4 \cot\left(\frac{7x}{4} + \frac{\pi}{4}\right)$	(ii)	Find the maximum and minimum value of $\frac{1}{7+3\cos(-2x)}$
(iii)	Evaluate $\lim_{x \rightarrow 2} \left(\frac{x^3 - 8}{x^2 - 5x + 6}\right)$	(iv)	Evaluate $\lim_{x \rightarrow 0} \frac{1 - \cos 2x}{x^2}$
(v)	Find the limit of the sequence $a_n = \frac{2n+3}{n+1}$	(vi)	Differentiate $y = \frac{3}{4}x^4 + \frac{2}{3}x^3 + \frac{1}{2}x^2 + 2x + 5$ w.r.t. x
(vii)	Find the derivative of $y = (x^2 + 5)(x^3 + 7)$ w.r.t. x	(viii)	Write steps to find derivative by definition.
(ix)	The position of a car after t hours is given by $s(t) = 2t^3 - 3t^2 + t$ (in kilometres) Find the average velocity over the interval $[1, 4]$		
(x)	Find t , so that $ 2\mathbf{i} + (t-1)\mathbf{j} + t\mathbf{k} = \sqrt{13}$	(xi)	Find the direction cosines of $\mathbf{v} = 4\mathbf{i} + 2\mathbf{j} - 5\mathbf{k}$
(xii)	Find a real number α , so that the vectors $\mathbf{u} = \alpha\mathbf{i} + 2\alpha\mathbf{j} - \mathbf{k}$ and $\mathbf{v} = \mathbf{i} + \alpha\mathbf{j} + 3\mathbf{k}$ are perpendicular.		
(xiii)	If $\mathbf{u} = 2\mathbf{i} - \mathbf{j} + \mathbf{k}$ and $\mathbf{v} = 4\mathbf{i} + 2\mathbf{j} - \mathbf{k}$, then find $\mathbf{u} \times \mathbf{v}$.		
SECTION-II			
NOTE: Attempt any three questions.			3 × 10 = 30
5.(a)	Find the square root of complex number $5 + 12i$	(b)	Solve the equation $\frac{a}{ax-1} + \frac{b}{bx-1} = a+b$; $x \neq \frac{1}{a}, \frac{1}{b}$
6.(a)	Solve the following systems of linear equations by Cramer's rule: $\begin{cases} 2x + y - z = 1 \\ x - y + 2z = 3 \\ 3x + 2y + z = 4 \end{cases}$	(b)	Resolve $\frac{2x^2+3x+3}{(x+1)(x^2+1)}$ into partial fractions.
7.(a)	For what value of n , $\frac{a^n + b^n}{a^{n+1} + b^{n+1}}$ is the positive geometric mean between a and b ?		
(b)	In how many ways can 8 different books including 2 on English be arranged on a shelf in such a way that the English books are never together?		
8.(a)	If α, β, γ are the angles of $\triangle ABC$, prove that $\tan \alpha + \tan \beta + \tan \gamma = \tan \alpha \tan \beta \tan \gamma$		
(b)	Find the values of m and n , so that the function $f(x) = \begin{cases} mx & \text{if } x < 3 \\ n & \text{if } x = 3 \\ -2x+9 & \text{if } x > 3 \end{cases}$ is continuous at $x = 3$		
9.(a)	Find the coordinates of point of tangency and the equation of the tangent line for $f(x) = x^3 - 2x + 1$ at $x = 1$		
(b)	If $\underline{a} + \underline{b} + \underline{c} = \underline{0}$, then prove that $\underline{a} \times \underline{b} = \underline{b} \times \underline{c} = \underline{c} \times \underline{a}$		

INTERMEDIATE PART-I (11 th Class)		2026 (1 st -A)	Roll No:
MATHEMATICS (NEW COURSE) PAPER-I		GROUP-II	
TIME ALLOWED: 2.30 Hours		SUBJECTIVE	
		MAXIMUM MARKS: 80	
NOTE: Write same question number and its parts number on answer book, as given in the question paper.			
SECTION-I			
2. Attempt any eight parts.			8 × 2 = 16
(i)	If $z_1 = (4, 2)$ and $z_2 = (3, -1)$ then find $\frac{z_1}{z_2}$	(ii)	If $z_1 = -13 + 24i$ and $z_2 = x + yi$, find the real values of x and y such that $z_1 - z_2 = -27 + 15i$
(iii)	Find the three cube root of -8 .	(iv)	Factorize the polynomial $P(z) = z^2 + 6z + 13$
(v)	Find the domain and the range of $g(x) = \frac{x+2}{3-x}$	(vi)	If $f(x) = x^3 + x^2 - 1$ then find $\frac{f(a+h)-f(a)}{h}$
(vii)	Solve $ x^2 - 4 = 5$	(viii)	Find the maximum or minimum value of $f(x) = x^2 + 6x + 13$
(ix)	If A and B are square matrices of the same order, then explain why in general $(A - B)^2 \neq A^2 - 2AB + B^2$		
(x)	Find the value of λ if $A = \begin{bmatrix} 4 & 2 & 3 \\ 7 & \lambda & 6 \\ 2 & 3 & 1 \end{bmatrix}$ is singular.	(xi)	Using properties of determinants, show that $\begin{vmatrix} 3 & 5 & 0 \\ 5 & 25 & 10 \\ 7 & 25 & 1 \end{vmatrix} = 25 \begin{vmatrix} 3 & 1 & 0 \\ 1 & 1 & 2 \\ 7 & 5 & 1 \end{vmatrix}$
(xii)	Resolve $\frac{2}{x-1}$ into partial fractions.		
3. Attempt any eight parts.			8 × 2 = 16
(i)	Write down the first three terms of the sequence $a_1 = -1, a_{n+1} = \frac{3}{a_n + 2}$		
(ii)	Is 301 a term of A.P. 5, 11, 17,?	(iii)	Find the 6 th term of the G.P. $-6, -3, \frac{-3}{2}, \dots$
(iv)	Find the 9 th term of the harmonic sequence $\frac{-1}{5}, \frac{-1}{3}, -1, \dots$	(v)	Express $\frac{(n+2)!}{(r+2)!} + \frac{(n+1)!}{(r+1)!}$ as a single fraction.
(vi)	How many arrangements of the letters of the words PAKISTAN taken all together can be made?		
(vii)	Prove that ${}^nC_r = {}^nC_{n-r}$	(viii)	State Remainder Theorem.
(ix)	Use the factor theorem to determine if the first polynomial is a factor of second polynomial $x - 2, x^3 + x^2 - 7x + 2$		
(x)	Find distance between the points $P(\cos x, \cos y), Q(\sin x, \sin y)$		
(xi)	If α, β, γ are the angles of a triangle ABC , then prove that $\sin(\alpha + \beta) = \sin \gamma$		
(xii)	Find $\cos 2\alpha$ when $\cos \alpha = \frac{4}{5}$ where $0 < \alpha < \frac{\pi}{2}$		
4. Attempt any nine parts.			9 × 2 = 18
(i)	Determine whether $\sin^4 x + \cos^4 x$ is even or odd function.	(ii)	Find maximum value of $1 + 2\sin\left(x + \frac{\pi}{6}\right)$
(iii)	Evaluate $\lim_{x \rightarrow \infty} \frac{x^2 - 1}{x^2 - x}$	(iv)	Express $\lim_{n \rightarrow \infty} \left(1 - \frac{1}{n}\right)^n$ in terms of e .
(v)	If $f(x) = 2x^2 + x - 5, c = 1$ then find left hand limit and right hand limit of $f(x)$		
(vi)	Differentiate $(x-5)(3-x)$ w.r.t. x	(vii)	If $y = \frac{1}{x^2}$, then find $\frac{dy}{dx}$ by ab-initio method.
(viii)	Differentiate $\frac{x^2+1}{x^2-3}$ w.r.t. x	(ix)	Differentiate $x^{-3} + 2x^{-3/2} + 3$ w.r.t. x
(x)	If $\underline{a} = -4\underline{i} + \underline{j} - 2\underline{k}, \underline{b} = 2\underline{i} + \underline{j} + \underline{k}$ then show that $\underline{a} \times \underline{b}$ is perpendicular to $\underline{a}$		
(xi)	The constant forces $2\underline{i} + 5\underline{j} + 6\underline{k}$ and $-\underline{i} - 2\underline{j} - \underline{k}$ act on a body displaced from position $P(4, -3, -2)$ to $Q(6, 1, -3)$. Find total work done.		
(xii)	Find a unit vector in the direction of $\underline{v} = -\underline{i} + 4\underline{j} - 8\underline{k}$		
(xiii)	Find cosine of the angle ' θ ' between $\underline{u}$ and $\underline{v}$, if $\underline{u} = [-3, 2, 5], \underline{v} = [1, 6, -2]$		
SECTION-II			
NOTE: Attempt any three questions.			3 × 10 = 30
5.(a)	Find the real value of x and y if $(x+iy)^2 = 64 + 48i$	(b)	Solve $\sqrt{2x+8} + \sqrt{x+5} = 7$
6.(a)	Solve the system of linear equations by matrix inversion method: $\begin{cases} x + y - z = 2 \\ 2x + z + 1 = 0 \\ 2y - 3z = -1 \end{cases}$	(b)	Resolve $\frac{1}{(x+1)^2(x^2-1)}$ into partial fractions.
7.(a)	For what value of ' n ' $\frac{a^n + b^n}{a^{n-1} + b^{n-1}}$ is the geometric mean between ' a ' and ' b '?		
(b)	The members of a club are 10 boys and 8 girls. In how many ways can a committee of 6 boys and 3 girls be formed?		
8.(a)	Prove that $\frac{\sin \theta + \sin 3\theta + \sin 5\theta + \sin 7\theta}{\cos \theta + \cos 3\theta + \cos 5\theta + \cos 7\theta} = \tan 4\theta$		
(b)	Find the value of ' m ', so that given function f is continuous at $x = 3$, $f(x) = \begin{cases} mx & \text{if } x < 3 \\ x^2 & \text{if } x \geq 3 \end{cases}$		
9.(a)	For the function $f(x) = 2x^3 + x$ calculate the equation of tangent line at $x = -1$		
(b)	Prove that $\sin(\alpha + \beta) = \sin \alpha \cos \beta + \cos \alpha \sin \beta$ by vector method.		

PAPER CODE: 2191		2026 (1st-A)		INTERMEDIATE PART-I (11 th Class)		Roll No: _____	
MATHEMATICS (NEW COURSE) PAPER-I GROUP-I							
TIME ALLOWED: 30 Minutes		OBJECTIVE			MAXIMUM MARKS: 20		
Q.No.1	You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question.						
S.#	QUESTIONS	A	B	C	D		
1	If $z = \sqrt{2} + i\sqrt{2}$, then $ z =$ ____.	$2\sqrt{2}$	2 ✓	$\sqrt{2}\sqrt{2}$	$\sqrt{2}$		
2	If ω is a cube root of unity, then $1 + \omega^6 + \omega^{12} =$ ____.	0	$-\omega$	$-\omega^2$	5 ✓		
3	If each side of a cube has length 1 m, what will be its surface area?	$1m^2$	$2m^2$	$6m^2$ ✓	$8m^2$		
4	The vertex of the parabola $f(x) = 5x^2$ is:	(0,0) ✓	(0,1)	(5,0)	(0,5)		
5	What is the value of 'x' if $\begin{vmatrix} 3 & 2 \\ x & 4 \end{vmatrix} = 2$?	1	3	5 ✓	7		
6	$(AB)' =$ ____.	AB	BA	$A'B'$	$B'A'$ ✓		
7	If $\frac{3x}{(x-1)(x+2)} = \frac{1}{x-1} + \frac{B}{x+2}$, then $B =$ ____.	2 ✓	3	4	5		
8	If $5, 5 + \sqrt{2}, 5 + 2\sqrt{2}, \dots$ is A.P, then its 4 th term will be:	$5 + 4\sqrt{2}$	$5 + 3\sqrt{2}$ ✓	$5 + 6\sqrt{2}$	$5 + 7\sqrt{2}$		
9	If $\frac{1}{3}, \frac{1}{k+1}, \frac{1}{11}$ are in H.P., then $k =$ ____.	2	4	6 ✓	8		
10	$5 \times {}^4P_4 =$ ____.	20	60	100	120 ✓		
11	5 persons can be seated at a round table in how many ways?	24 ✓	12	120	60		
12	If $(x-2)$ is a factor of $ax^2 - 12x + 4$, then $a =$ ____.	-5	5 ✓	20	-20		
13	Distance between (3, 8) and (5, 6) is:	2	$\sqrt{2}$	$2\sqrt{2}$ ✓	3		
14	$\sin\left(\frac{7\pi}{2} + \theta\right) =$ ____.	$-\cos\theta$ ✓	$\sin\theta$	$-\sin\theta$	$\cos\theta$		
15	$f(x) = \cos x$ is an ____ function.	Odd	Identity	Constant	Even ✓		
16	$\lim_{x \rightarrow 0} e^{\frac{1}{x}} =$ ____, where $x < 0$	$+\infty$	$-\infty$	0 ✓	1		
17	If $f(x) = (x+1)^5$, then $f'(0) =$ ____.	0	5 ✓	10	1		
18	$\frac{1}{2\sqrt{x}}$ is the derivative of ____.	$\sqrt{x}$ ✓	$\frac{\sqrt{x}}{2}$	$2\sqrt{x}$	$x^{\frac{1}{3}}$		
19	The projection of $6\hat{i} + 2\hat{j} + \hat{k}$ along $\hat{i}$ is:	2	6 ✓	1	0		
20	If α, β and γ are directional angles of a vector $\underline{u}$, then $\cos^2 \alpha + \cos^2 \beta + \cos^2 \gamma =$ ____.	0	-1	1 ✓	2		

PAPER CODE: 2193		2026 (1st-A)		Roll No: _____	
		INTERMEDIATE PART-I (11 th Class)			
MATHEMATICS (NEW COURSE) PAPER-I GROUP-I					
TIME ALLOWED: 30 Minutes		OBJECTIVE		MAXIMUM MARKS: 20	
Q.No.1	You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question.				
S.#	QUESTIONS	A	B	C	D
1	$\lim_{x \rightarrow 0} e^{\frac{1}{x}} = \underline{\hspace{1cm}}$, where $x < 0$	$+\infty$	$-\infty$	0	1
2	If $f(x) = (x+1)^2$, then $f'(0) = \underline{\hspace{1cm}}$.	0	5	10	1
3	$\frac{1}{2\sqrt{x}}$ is the derivative of $\underline{\hspace{1cm}}$.	$\sqrt{x}$	$\frac{\sqrt{x}}{2}$	$2\sqrt{x}$	$x^{\frac{1}{3}}$
4	The projection of $6\hat{i} + 2\hat{j} + \hat{k}$ along $\hat{i}$ is:	2	6	1	0
5	If α, β and γ are directional angles of a vector $\underline{u}$, then $\cos^2 \alpha + \cos^2 \beta + \cos^2 \gamma = \underline{\hspace{1cm}}$.	0	-1	1	2
6	If $z = \sqrt{2} + i\sqrt{2}$, then $ z = \underline{\hspace{1cm}}$.	$2\sqrt{2}$	2	$\sqrt{2\sqrt{2}}$	$\sqrt{2}$
7	If ω is a cube root of unity, then $1 + \omega^0 + \omega^{12} = \underline{\hspace{1cm}}$.	0	$-\omega$	$-\omega^2$	3
8	If each side of a cube has length 1 m, what will be its surface area?	$1m^2$	$2m^2$	$6m^2$	$8m^2$
9	The vertex of the parabola $f(x) = 5x^2$ is:	(0,0)	(0,1)	(5,0)	(0,5)
10	What is the value of 'x' if $\begin{vmatrix} 3 & 2 \\ x & 4 \end{vmatrix} = 2$?	1	3	5	7
11	$(AB)' = \underline{\hspace{1cm}}$.	AB	BA	$A'B'$	$B'A'$
12	If $\frac{3x}{(x-1)(x+2)} = \frac{1}{x-1} + \frac{B}{x+2}$, then $B = \underline{\hspace{1cm}}$.	2	3	4	5
13	If $5, 5 + \sqrt{2}, 5 + 2\sqrt{2}, \dots$ is A.P, then its 4 th term will be:	$5 + 4\sqrt{2}$	$5 + 3\sqrt{2}$	$5 + 6\sqrt{2}$	$5 + 7\sqrt{2}$
14	If $\frac{1}{3}, \frac{1}{k+1}, \frac{1}{11}$ are in H.P., then $k = \underline{\hspace{1cm}}$.	2	4	6	8
15	$5 \times {}^4P_4 = \underline{\hspace{1cm}}$.	20	60	100	120
16	5 persons can be seated at a round table in how many ways?	24	12	120	60
17	If $(x-2)$ is a factor of $ax^2 - 12x + 4$, then $a = \underline{\hspace{1cm}}$.	-5	5	20	-20
18	Distance between (3, 8) and (5, 6) is:	2	$\sqrt{2}$	$2\sqrt{2}$	3
19	$\sin\left(\frac{7\pi}{2} + \theta\right) = \underline{\hspace{1cm}}$.	$-\cos \theta$	$\sin \theta$	$-\sin \theta$	$\cos \theta$
20	$f(x) = \cos x$ is an $\underline{\hspace{1cm}}$ function.	Odd	Identity	Constant	Even

PAPER CODE: 2195		2026 (1st-A)		Roll No: _____	
		INTERMEDIATE PART-I (11 th Class)			
MATHEMATICS (NEW COURSE) PAPER-I GROUP-I					
TIME ALLOWED: 30 Minutes		OBJECTIVE		MAXIMUM MARKS: 20	
Q.No.1	You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question.				
S.#	QUESTIONS	A	B	C	D
1	$(AB)' = \underline{\hspace{1cm}}$.	AB	BA	$A'B'$	$B'A'$
2	If $\frac{3x}{(x-1)(x+2)} = \frac{1}{x-1} + \frac{B}{x+2}$, then $B = \underline{\hspace{1cm}}$.	2	3	4	5
3	If $5, 5 + \sqrt{2}, 5 + 2\sqrt{2}, \dots$ is A.P., then its 4 th term will be:	$5 + 4\sqrt{2}$	$5 + 3\sqrt{2}$	$5 + 6\sqrt{2}$	$5 + 7\sqrt{2}$
4	If $\frac{1}{3}, \frac{1}{k+1}, \frac{1}{11}$ are in H.P., then $k = \underline{\hspace{1cm}}$.	2	4	6	8
5	$5 \times {}^4P_4 = \underline{\hspace{1cm}}$.	20	60	100	120
6	5 persons can be seated at a round table in how many ways?	24	12	120	60
7	If $(x-2)$ is a factor of $ax^2 - 12x + 4$, then $a = \underline{\hspace{1cm}}$.	-5	5	20	-20
8	Distance between (3, 8) and (5, 6) is:	2	$\sqrt{2}$	$2\sqrt{2}$	3
9	$\sin\left(\frac{7\pi}{2} + \theta\right) = \underline{\hspace{1cm}}$.	$-\cos\theta$	$\sin\theta$	$-\sin\theta$	$\cos\theta$
10	$f(x) = \cos x$ is an _____ function.	Odd	Identity	Constant	Even
11	$\lim_{x \rightarrow 0} e^{\frac{1}{x}} = \underline{\hspace{1cm}}$, where $x < 0$	$+\infty$	$-\infty$	0	1
12	If $f(x) = (x+1)^5$, then $f'(0) = \underline{\hspace{1cm}}$.	0	5	10	1
13	$\frac{1}{2\sqrt{x}}$ is the derivative of _____.	$\sqrt{x}$	$\frac{\sqrt{x}}{2}$	$2\sqrt{x}$	$x^{\frac{1}{3}}$
14	The projection of $6\hat{i} + 2\hat{j} + \hat{k}$ along $\hat{i}$ is:	2	6	1	0
15	If α, β and γ are directional angles of a vector $\underline{u}$, then $\cos^2 \alpha + \cos^2 \beta + \cos^2 \gamma = \underline{\hspace{1cm}}$.	0	-1	1	2
16	If $z = \sqrt{2} + i\sqrt{2}$, then $ z = \underline{\hspace{1cm}}$.	$2\sqrt{2}$	2	$\sqrt{2\sqrt{2}}$	$\sqrt{2}$
17	If ω is a cube root of unity, then $1 + \omega^6 + \omega^{12} = \underline{\hspace{1cm}}$.	0	$-\omega$	$-\omega^2$	3
18	If each side of a cube has length $1m$, what will be its surface area?	$1m^2$	$2m^2$	$6m^2$	$8m^2$
19	The vertex of the parabola $f(x) = 5x^2$ is:	(0,0)	(0,1)	(5,0)	(0,5)
20	What is the value of 'x' if $\begin{vmatrix} 3 & 2 \\ x & 4 \end{vmatrix} = 2$?	1	3	5	7

PAPER CODE: 2197		2026 (1st-A)		Roll No: _____	
MATHEMATICS (NEW COURSE)		INTERMEDIATE PART-I (11 th Class)			
PAPER-I		GROUP-I			
TIME ALLOWED: 30 Minutes		OBJECTIVE		MAXIMUM MARKS: 20	
Q.No.1	You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question.				
S.#	QUESTIONS	A	B	C	D
1	5 persons can be seated at a round table in how many ways?	24	12	120	60
2	If $(x - 2)$ is a factor of $ax^2 - 12x + 4$, then $a =$ _____.	-5	5	20	-20
3	Distance between $(3, 8)$ and $(5, 6)$ is:	2	$\sqrt{2}$	$2\sqrt{2}$	3
4	$\sin\left(\frac{7\pi}{2} + \theta\right) =$ _____.	$-\cos\theta$	$\sin\theta$	$-\sin\theta$	$\cos\theta$
5	$f(x) = \cos x$ is an _____ function.	Odd	Identity	Constant	Even
6	$\lim_{x \rightarrow 0} e^{\frac{1}{x}} =$ _____, where $x < 0$	$+\infty$	$-\infty$	0	1
7	If $f(x) = (x + 1)^5$, then $f'(0) =$ _____.	0	5	10	1
8	$\frac{1}{2\sqrt{x}}$ is the derivative of _____.	$\sqrt{x}$	$\frac{\sqrt{x}}{2}$	$2\sqrt{x}$	$x^{\frac{1}{3}}$
9	The projection of $6\hat{i} + 2\hat{j} + \hat{k}$ along $\hat{i}$ is:	2	6	1	0
10	If α, β and γ are directional angles of a vector $\underline{u}$, then $\cos^2 \alpha + \cos^2 \beta + \cos^2 \gamma =$ _____.	0	-1	1	2
11	If $z = \sqrt{2} + i\sqrt{2}$, then $ z =$ _____.	$2\sqrt{2}$	2	$\sqrt{2\sqrt{2}}$	$\sqrt{2}$
12	If ω is a cube root of unity, then $1 + \omega^6 + \omega^{12} =$ _____.	0	$-\omega$	$-\omega^2$	3
13	If each side of a cube has length $1m$, what will be its surface area?	$1m^2$	$2m^2$	$6m^2$	$8m^2$
14	The vertex of the parabola $f(x) = 5x^2$ is:	(0,0)	(0,1)	(5,0)	(0,5)
15	What is the value of 'x' if $\begin{vmatrix} 3 & 2 \\ x & 4 \end{vmatrix} = 2$?	1	3	5	7
16	$(AB)' =$ _____.	AB	BA	$A'B'$	$B'A'$
17	If $\frac{3x}{(x-1)(x+2)} = \frac{1}{x-1} + \frac{B}{x+2}$, then $B =$ _____.	2	3	4	5
18	If $5, 5 + \sqrt{2}, 5 + 2\sqrt{2}, \dots$ is A.P, then its 4 th term will be:	$5 + 4\sqrt{2}$	$5 + 3\sqrt{2}$	$5 + 6\sqrt{2}$	$5 + 7\sqrt{2}$
19	If $\frac{1}{3}, \frac{1}{k+1}, \frac{1}{11}$ are in H.P., then $k =$ _____.	2	4	6	8
20	$5 \times {}^4P_4 =$ _____.	20	60	100	120

PAPER CODE: 2192		2026 (1st-A)		Roll No: _____	
		INTERMEDIATE PART-I (11 th Class)			
MATHEMATICS (NEW COURSE) PAPER-I GROUP-II					
TIME ALLOWED: 30 Minutes		OBJECTIVE		MAXIMUM MARKS: 20	
Q.No.1	You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question.				
S.#	QUESTIONS	A	B	C	D
1	If $z = -3 - 4i$ then $ \bar{z} =$	$-\sqrt{5}$	5	-5	$\sqrt{5}$
2	Multiplicative inverse of $-3i$ is:	$\frac{-i}{3}$	$-i$	i	$\frac{i}{3}$
3	If $f(x) = x^2 - 1$ then $f(0) =$	i	1	-1	$-i$
4	The solution set of $x^2 - 9x + 20 = 0$ is:	{4, 5}	{4, -5}	{-4, 5}	{-4, -5}
5	If A is a matrix of order 3×4 then order of AA' is:	4×4	4×3	3×4	3×3
6	$\begin{vmatrix} 7 & 2 & 5 \\ 0 & 1 & 0 \\ 0 & 0 & -1 \end{vmatrix} =$	-7	0	1	7
7	$(x+2)^2 = x^2 + 4x + 4$ is:	Cubic equation	An identity	Linear equation	Quadratic equation
8	$3^1 + 3^2 + 3^3 + \dots + 3^n =$	$3(3^{n-1} - 1)$	$3(3^{n-1} + 1)$	$3(3^n + 1)$	$3(3^n - 1)$
9	21th term of $2 + 4 + 6 + \dots$ is:	21	-42	42	-21
10	$\frac{7! \cdot 2!}{4!}$ is equal to:	420	210	220	410
11	$4 \cdot {}^3P_2$ is equal to:	1	4	6	24
12	Roots of polynomial $x^2 + 1$ are:	1	$\pm i$	0	-1
13	$\cot(\pi - \theta) =$	$\tan \theta$	$\cot \theta$	$-\cot \theta$	$-\tan \theta$
14	$\tan(\pi + \theta) =$	$-\tan \theta$	$-\cot \theta$	$\cot \theta$	$\tan \theta$
15	Period of $\tan \frac{x}{3}$ is:	3π	π	$\frac{\pi}{3}$	2π
16	$\lim_{x \rightarrow 0} \frac{\sin^2 x}{x} =$	-1	1	0	2
17	If $f(x) = 2x^2 - 3$ then $f'(1) =$	-1	4	-4	1
18	Derivative of $\frac{2}{x}$ w.r.t. 'x' is:	$-2x^{-2}$	2	0	$2x^2$
19	The projection of $\underline{i} + 2\underline{j}$ along $\underline{j}$ is:	-1	2	-2	1
20	If $\underline{u} = 2\underline{i} - 2\underline{j}$ then $ \underline{u} =$	$-\sqrt{8}$	8	4	$2\sqrt{2}$

PAPER CODE: 2194		2026 (1st-A)		Roll No: _____	
		INTERMEDIATE PART-I (11 th Class)			
MATHEMATICS (NEW COURSE) PAPER-I GROUP-II					
TIME ALLOWED: 30 Minutes		OBJECTIVE		MAXIMUM MARKS: 20	
Q.No.1	You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question.				
S.#	QUESTIONS	A	B	C	D
1	$4 \cdot {}^3P_2$ is equal to:	1	4	6	24
2	Roots of polynomial $x^2 + 1$ are:	1	$\pm i$	0	-1
3	$\cot(\pi - \theta) =$	$\tan \theta$	$\cot \theta$	$-\cot \theta$	$-\tan \theta$
4	$\tan(\pi + \theta) =$	$-\tan \theta$	$-\cot \theta$	$\cot \theta$	$\tan \theta$
5	Period of $\tan \frac{x}{3}$ is:	3π	π	$\frac{\pi}{3}$	2π
6	$\lim_{x \rightarrow 0} \frac{\sin^2 x}{x} =$	-1	1	0	2
7	If $f(x) = 2x^2 - 3$ then $f'(1) =$	-1	4	-4	1
8	Derivative of $\frac{2}{x}$ w.r.t. 'x' is:	$-2x^{-2}$	2	0	$2x^2$
9	The projection of $\underline{i} + 2\underline{j}$ along $\underline{j}$ is:	-1	2	-2	1
10	If $\underline{u} = 2\underline{i} - 2\underline{j}$ then $ \underline{u} =$	$-\sqrt{8}$	8	4	$2\sqrt{2}$
11	If $z = -3 - 4i$ then $ \bar{z} =$	$-\sqrt{5}$	5	-5	$\sqrt{5}$
12	Multiplicative inverse of $-3i$ is:	$\frac{-i}{3}$	$-i$	i	$\frac{i}{3}$
13	If $f(x) = x^2 - 1$ then $f(0) =$	i	1	-1	$-i$
14	The solution set of $x^2 - 9x + 20 = 0$ is:	{4, 5}	{4, -5}	{-4, 5}	{-4, -5}
15	If A is a matrix of order 3×4 then order of AA' is:	4×4	4×3	3×4	3×3
16	$\begin{vmatrix} 7 & 2 & 5 \\ 0 & 1 & 0 \\ 0 & 0 & -1 \end{vmatrix} =$	-7	0	1	7
17	$(x+2)^2 = x^2 + 4x + 4$ is:	Cubic equation	An identity	Linear equation	Quadratic equation
18	$3^1 + 3^2 + 3^3 + \dots + 3^n =$	$3(3^{n-1} - 1)$	$3(3^{n-1} + 1)$	$3(3^n + 1)$	$3(3^n - 1)$
19	21th term of $2 + 4 + 6 + \dots$ is:	21	-42	42	-21
20	$\frac{7! \cdot 2!}{4!}$ is equal to:	420	210	220	410

PAPER CODE: 2196		2026 (1st-A)		Roll No: _____	
		INTERMEDIATE PART-I (11 th Class)			
MATHEMATICS (NEW COURSE) PAPER-I GROUP-II					
TIME ALLOWED: 30 Minutes		OBJECTIVE		MAXIMUM MARKS: 20	
Q.No.1	You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question.				
S.#	QUESTIONS	A	B	C	D
1	$\begin{vmatrix} 7 & 2 & 5 \\ 0 & 1 & 0 \\ 0 & 0 & -1 \end{vmatrix} =$	-7	0	1	7
2	$(x+2)^2 = x^2 + 4x + 4$ is:	Cubic equation	An identity	Linear equation	Quadratic equation
3	$3^1 + 3^2 + 3^3 + + 3^n =$	$3(3^{n-1} - 1)$	$3(3^{n-1} + 1)$	$3(3^n + 1)$	$3(3^n - 1)$
4	21th term of $2 + 4 + 6 + $ is:	21	-42	42	-21
5	$\frac{7! \cdot 2!}{4!}$ is equal to:	420	210	220	410
6	$4 \cdot {}^3P_2$ is equal to:	1	4	6	24
7	Roots of polynomial $x^2 + 1$ are:	1	$\pm i$	0	-1
8	$\cot(\pi - \theta) =$	$\tan \theta$	$\cot \theta$	$-\cot \theta$	$-\tan \theta$
9	$\tan(\pi + \theta) =$	$-\tan \theta$	$-\cot \theta$	$\cot \theta$	$\tan \theta$
10	Period of $\tan \frac{x}{3}$ is:	3π	π	$\frac{\pi}{3}$	2π
11	$\lim_{x \rightarrow 0} \frac{\sin^2 x}{x} =$	-1	1	0	2
12	If $f(x) = 2x^2 - 3$ then $f'(1) =$	-1	4	-4	1
13	Derivative of $\frac{2}{x}$ w.r.t. 'x' is:	$-2x^{-2}$	2	0	$2x^2$
14	The projection of $\underline{i} + 2\underline{j}$ along $\underline{j}$ is:	-1	2	-2	1
15	If $\underline{u} = 2\underline{i} - 2\underline{j}$ then $ \underline{u} =$	$-\sqrt{8}$	8	4	$2\sqrt{2}$
16	If $z = -3 - 4i$ then $ \overline{z} =$	$-\sqrt{5}$	5	-5	$\sqrt{5}$
17	Multiplicative inverse of $-3i$ is:	$\frac{-i}{3}$	$-i$	i	$\frac{i}{3}$
18	If $f(x) = x^2 - 1$ then $f(0) =$	i	1	-1	$-i$
19	The solution set of $x^2 - 9x + 20 = 0$ is:	{4, 5}	{4, -5}	{-4, 5}	{-4, -5}
20	If A is a matrix of order 3×4 then order of AA' is:	4×4	4×3	3×4	3×3

PAPER CODE: 2198		2026 (1st-A)		Roll No: _____	
		INTERMEDIATE PART-I (11 th Class)			
MATHEMATICS (NEW COURSE) PAPER-I GROUP-II					
TIME ALLOWED: 30 Minutes		OBJECTIVE		MAXIMUM MARKS: 20	
Q.No.1	You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question.				
S.#	QUESTIONS	A	B	C	D
1	$\lim_{x \rightarrow 0} \frac{\sin^2 x}{x} =$	-1	1	0	2
2	If $f'(x) = 2x^2 - 3$ then $f'(1) =$	-1	4	-4	1
3	Derivative of $\frac{2}{x}$ w.r.t. 'x' is:	$-2x^{-2}$	2	0	$2x^2$
4	The projection of $\underline{i} + 2\underline{j}$ along $\underline{j}$ is:	-1	2	-2	1
5	If $\underline{u} = 2\underline{i} - 2\underline{j}$ then $ \underline{u} =$	$-\sqrt{8}$	8	4	$2\sqrt{2}$
6	If $z = -3 - 4i$ then $ \bar{z} =$	$-\sqrt{5}$	5	-5	$\sqrt{5}$
7	Multiplicative inverse of $-3i$ is:	$\frac{-i}{3}$	$-i$	i	$\frac{i}{3}$
8	If $f(x) = x^2 - 1$ then $f(0) =$	i	1	-1	$-i$
9	The solution set of $x^2 - 9x + 20 = 0$ is:	{4, 5}	{4, -5}	{-4, 5}	{-4, -5}
10	If A is a matrix of order 3×4 then order of AA' is:	4×4	4×3	3×4	3×3
11	$\begin{vmatrix} 7 & 2 & 5 \\ 0 & 1 & 0 \\ 0 & 0 & -1 \end{vmatrix} =$	-7	0	1	7
12	$(x+2)^2 = x^2 + 4x + 4$ is:	Cubic equation	An identity	Linear equation	Quadratic equation
13	$3^1 + 3^2 + 3^3 + \dots + 3^n =$	$3(3^{n-1} - 1)$	$3(3^{n-1} + 1)$	$3(3^n + 1)$	$3(3^n - 1)$
14	21th term of $2 + 4 + 6 + \dots$ is:	21	-42	42	-21
15	$\frac{7! \cdot 2!}{4!}$ is equal to:	420	210	220	410
16	$4 \cdot {}^3P_2$ is equal to:	1	4	6	24
17	Roots of polynomial $x^2 + 1$ are:	1	$\pm i$	0	-1
18	$\cot(\pi - \theta) =$	$\tan \theta$	$\cot \theta$	$-\cot \theta$	$-\tan \theta$
19	$\tan(\pi + \theta) =$	$-\tan \theta$	$-\cot \theta$	$\cot \theta$	$\tan \theta$
20	Period of $\tan \frac{x}{3}$ is:	3π	π	$\frac{\pi}{3}$	2π

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, MULTAN.
OBJECTIVE KEY FOR INTERMEDIATE 1st ANNUAL EXAMINATION, 2026

old

Name of Subject: Math

Group: 1st

Q. Nos	Paper Code	Correct Answer	Paper Code	Correct Answer	Paper Code	Correct Answer	Paper Code	Correct Answer
	6191		6193		6195		6197	
1	B	C	C	8	B	W	C	$\frac{\pi}{4}$
2	C	$\{\phi\}$	B	π	D	$\frac{4}{5}$	D	90°
3	D	1	A	120°	B	15	A	$\frac{abc}{4A}$
4	C	$B^t A^t$	B	0	A	$4\sqrt{5}$	C	$\frac{5}{2}$
5	D	$-w, -w^2$	A	$2\cos^2 x - 1$	D	$n!$	B	$\frac{\pi}{4}$
6	B	W	C	$\frac{\pi}{5}$	C	8	B	C
7	D	$\frac{4}{5}$	D	90°	B	π	C	$\{\phi\}$
8	B	15	A	$\frac{abc}{4A}$	A	120°	D	1
9	A	$4\sqrt{5}$	C	$\sqrt{3}/2$	B	0	C	$B^t A^t$
10	D	$n!$	B	$\frac{\pi}{4}$	A	$2\cos^2 x - 1$	D	$-w, -w^2$
11	C	8	B	C	C	$\frac{\pi}{5}$	B	W
12	B	π	C	$\{\phi\}$	D	90°	D	$\frac{4}{5}$
13	A	120°	D	1	A	$\frac{abc}{4A}$	B	15
14	B	0	C	$B^t A^t$	C	$\sqrt{3}/2$	A	$4\sqrt{5}$
15	A	$2\cos^2 x - 1$	D	$-w, -w^2$	B	$\frac{\pi}{4}$	D	$n!$
16	C	$\frac{\pi}{5}$	B	W	B	C	C	8
17	D	90°	D	$\frac{4}{5}$	C	$\{\phi\}$	B	π
18	A	$\frac{abc}{4A}$	B	15	D	1	A	120°
19	C	$\sqrt{3}/2$	A	$4\sqrt{5}$	C	$B^t A^t$	B	0
20	B	$\frac{\pi}{4}$	D	$n!$	D	$-w, -w^2$	A	$2\cos^2 x - 1$
Cross Check	A B C D		A B C D		A B C D		A B C D	
Total	4655		4655		4655		4655	

مرتب شد بابت تصحیح سوالیہ پرچہ مارکنگ Key

ہم نے مضمون ریاضی پرچہ A گروپ 1st انٹرمیڈیٹ پہلا سالانہ امتحان 2026 کا سوالیہ پرچہ انشائیہ و معروضی (Subjective & Objective) کو منظرِ عین چیک کر لیا ہے یہ پرچہ Syllabus کے تین مطابق Set کیا گیا ہے۔ اس سوالیہ پرچہ میں کسی قسم کی کوئی غلطی نہ ہے۔ ہم نے سوالیہ پرچہ کا اردو اور انگریزی Version بھی چیک کر لیا ہے۔ یہ Version آپس میں مطابقت رکھتے ہیں۔ نیز اس پرچہ کی معروضی (MCQs) Key کی بہت تصدیق کی جاتی ہے کہ اس میں بھی کسی قسم کی کوئی غلطی نہ ہے۔ مزید یہ کہ ہم نے Key بنانے سے متعلق دفتر کی جانب سے تیار کردہ ہدایات وصول کر کے ان کا بغور مطالعہ کر لیا ہے اور ان کی روشنی میں Key بنائی ہے۔ نیز سب ایگزامینرز کیلئے تفصیلی مارکنگ ہدایات / مارکنگ سکیم / Rubrics بھی تیار کر دی گئی ہیں۔

Prepared & Checked By:

Dated: 23-06-26

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1	HAF NAWAZ	SSS	G.H.S.S Lar Multan	03007187736	
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5	H.M. Farhad	A.P	G.H.S.S. College Multan	03007331979	

Re-Checked By: ہم نے درج بالا سوالیہ پرچہ (انشائیہ + معروضی) کی معروضی "Key" اور ہدایات کے حوالہ سے مکمل طور پر تکرار کر لی ہے۔ کسی قسم کی کوئی غلطی نہ ہے۔

1	Dr. M. TAYED TAYED	SSS	G.H.S.S 138-10 R	03226171679	
2					

Dr.

INTERMEDIATE PART-I (11 th Class)		2026 (1 st -A)	Roll No: _____
MATHEMATICS (OLD COURSE) PAPER-I		GROUP-I	
TIME ALLOWED: 2.30 Hours		SUBJECTIVE	
		MAXIMUM MARKS: 80	
NOTE: Write same question number and its parts number on answer book, as given in the question paper.			
SECTION-I			
2. Attempt any eight parts.			8 × 2 = 16
(i)	Whether the given set has closure property w.r.t. addition and multiplication $\{0, -1\}$		
(ii)	Simplify $(-1)^{-2\frac{1}{2}}$	(iii)	What is the difference between $\{a, b\}$ and $\{\{a, b\}\}$?
(iv)	Verify commutative property of union and intersection for $1N$ = the set of natural nos. $\mathbb{Z}$ = the set of integers.		
(v)	Without expansion show that $\begin{vmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{vmatrix} = 0$	(vi)	Find the inverse of $\begin{bmatrix} 2i & i \\ i & -i \end{bmatrix}$
(vii)	If $A = \begin{bmatrix} 1 & 2 \\ a & b \end{bmatrix}$ and $A^2 = \begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$, find the values of a and b	(viii)	Evaluate $\begin{vmatrix} 1 & 2 & -2 \\ -1 & 1 & -3 \\ 2 & 4 & -1 \end{vmatrix}$
(ix)	Solve by using completing square $x^2 + 4x - 1085 = 0$	(x)	Show that $x^3 - y^3 = (x - y)(x - \omega y)(x - \omega^2 y)$
(xi)	Use the remainder theorem to find the remainder when the first polynomial is divided by the second polynomial $x^3 - x^2 + 5x + 4$, $(x - 2)$		
(xii)	Show that the roots of the equation $(p + q)x^2 - px - q = 0$ are rational.		
3. Attempt any eight parts.			8 × 2 = 16
(i)	Resolve $\frac{1}{(x-1)^2(x+1)}$ into partial fractions.	(ii)	Define improper fraction.
(iii)	Resolve $\frac{(x^2+1)}{(x+1)(x-1)}$ into partial fractions.	(iv)	Find A.M. between $3\sqrt{5}$ and $5\sqrt{5}$
(v)	Find the indicated term of 2, 6, 11, 17, a_7	(vi)	Which term of A.P. -2, 4, 10, is 148?
(vii)	Define arithmetic series.		
(viii)	How many signals can be given by 5 flags of different colours, using 3 flags at a time?		
(ix)	Find the value of n when ${}^nP_2 = 30$	(x)	Define circular permutation.
(xi)	Expand $(1 + 2x)^{-1}$ upto four terms.	(xii)	State principle of Mathematical Induction.
4. Attempt any nine parts.			9 × 2 = 18
(i)	Find ℓ when $\theta = \pi$ radians, $r = 6$ cm	(ii)	Verify $\sin 2\theta = 2\sin\theta\cos\theta$ when $\theta = 30^\circ$
(iii)	Prove that $\tan\theta + \cot\theta = \operatorname{cosec}\theta \sec\theta$		
(iv)	If α, β, γ are the angles of a triangle ABC , then prove that $\sin(\alpha + \beta) = \sin\gamma$		
(v)	Find the value of $\sin 15^\circ$	(vi)	Prove that $\cot\alpha - \tan\alpha = 2\cot 2\alpha$
(vii)	Find the period of $\sin 3x$	(viii)	Solve the triangle ABC , if $b = 125$, $\gamma = 53^\circ$, $\alpha = 47^\circ$
(ix)	Find the area of triangle ABC , if $a = 18$, $b = 24$, $c = 30$	(x)	Define angle of elevation.
(xi)	Show that $r = s \tan \frac{\alpha}{2}$	(xii)	Find the value of $\cos\left(\sin^{-1}\frac{1}{\sqrt{2}}\right)$
(xiii)	Solve the equation $1 + \cos x = 0$		
SECTION-II			
NOTE: Attempt any three questions.			3 × 10 = 30
5.(a)	Without expansion, show that $\begin{vmatrix} x & a+x & b+c \\ x & b+x & c+a \\ x & c+x & a+b \end{vmatrix} = 0$	(b)	Use synthetic division to find values of p and q if $x+1$ and $x-2$ are the factors of the polynomial $x^3 + px^2 + qx + 6$
6.(a)	Resolve $\frac{x^2}{(x^2+4)(x+2)}$ by partial fraction.	(b)	Show that ${}^{16}C_{11} + {}^{16}C_{10} = {}^{17}C_{11}$
7.(a)	Find the value of n if $\frac{a^n + b^n}{a^{n-1} + b^{n-1}}$ is positive G.M between a and b .		
(b)	Find the middle term of $\left(\frac{1}{x} - \frac{x^2}{2}\right)^{12}$		
8.(a)	Prove that $\frac{\tan\theta + \sec\theta - 1}{\tan\theta - \sec\theta + 1} = \tan\theta + \sec\theta$		
(b)	Prove that $\cos 20^\circ \cos 40^\circ \cos 60^\circ \cos 80^\circ = \frac{1}{16}$		
9.(a)	The sides of a triangle are $x^2 + x + 1$, $2x + 1$, and $x^2 - 1$ prove that the greatest angle of the triangle is 120°		
(b)	Show that $\sin^{-1}\frac{4}{5} + \sin^{-1}\frac{5}{13} + \sin^{-1}\frac{16}{65} = \frac{\pi}{2}$		

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, MULTAN.
OBJECTIVE KEY FOR INTERMEDIATE 1st ANNUAL EXAMINATION, 2026

(old)

Name of Subject: Mathematics

Tst Year Group: II

Q. Nos	Paper Code 6192	Correct Answer	Paper Code 6194	Correct Answer	Paper Code 6196	Correct Answer	Paper Code 6198	Correct Answer
1	D	irrational	D	2	B	$(-\infty, \infty)$	C	3
2	A	Distinct object	C	$(\frac{5}{2})^2$	C	oblique triangle	A	$n+1$
3	B	Matrix	A	Natural numbers	B	$\frac{a+b+c}{2}$	C	Anti-clockwise
4	C	$m \times n$	D	$a_1 + (n-1)d$	A	$\frac{\pi}{6}$	B	$\sin \theta$
5	A	quadratic	B	1	D	$n\pi$	D	$\frac{2 \tan \frac{A}{2}}{1 - \tan \frac{A}{2}}$
6	D	2	C	3	D	irrational	B	$(-\infty, \infty)$
7	C	$(\frac{5}{2})^2$	A	$n+1$	A	Distinct objects	C	oblique triangle
8	A	Natural numbers	C	Anti-clockwise	B	matrix	B	$\frac{a+b+c}{2}$
9	D	$a_1 + (n-1)d$	B	$\sin \theta$	C	$m \times n$	A	$\pi/6$
10	B	1	D	$\frac{2 \tan \frac{A}{2}}{1 - \tan \frac{A}{2}}$	A	quadratic	D	$n\pi$
11	C	3	B	$(-\infty, \infty)$	D	2	D	irrational
12	A	$n+1$	C	oblique triangle	C	$(\frac{5}{2})^2$	A	Distinct
13	C	Anti-clockwise	B	$\frac{a+b+c}{2}$	A	Natural numbers	B	matrix
14	B	$\sin \theta$	A	$\frac{\pi}{6}$	D	$a_1 + (n-1)d$	C	$m \times n$
15	D	$\frac{2 \tan \frac{A}{2}}{1 - \tan \frac{A}{2}}$	D	$n\pi$	B	1	A	quadratic
16	B	$(-\infty, \infty)$	D	irrational	C	3	D	2
17	C	oblique triangle	A	Distinct objects	A	$n+1$	C	$(\frac{5}{2})^2$
18	B	$\frac{a+b+c}{2}$	B	matrix	C	Anti-clockwise	A	Natural numbers
19	A	$\pi/6$	C	$m \times n$	B	$\sin \theta$	D	$a_1 + (n-1)d$
20	D	$n\pi$	A	Quadratic	D	$\frac{2 \tan \frac{A}{2}}{1 - \tan \frac{A}{2}}$	B	1
Cross Check	A B C D		A B C D		A B C D		A B C D	
Total	5555		5555		5555		5555	

Key پر مشتمل مابین سوالات پرچہ امارت

ہم نے مندرجہ ذیل پرچہ (old) I (old) II پرچہ (old) III پرچہ (old) IV پرچہ (old) V پرچہ (old) VI پرچہ (old) VII پرچہ (old) VIII پرچہ (old) IX پرچہ (old) X پرچہ (old) XI پرچہ (old) XII پرچہ (old) XIII پرچہ (old) XIV پرچہ (old) XV پرچہ (old) XVI پرچہ (old) XVII پرچہ (old) XVIII پرچہ (old) XIX پرچہ (old) XX پرچہ (old) XXI پرچہ (old) XXII پرچہ (old) XXIII پرچہ (old) XXIV پرچہ (old) XXV پرچہ (old) XXVI پرچہ (old) XXVII پرچہ (old) XXVIII پرچہ (old) XXIX پرچہ (old) XXX پرچہ (old) XXXI پرچہ (old) XXXII پرچہ (old) XXXIII پرچہ (old) XXXIV پرچہ (old) XXXV پرچہ (old) XXXVI پرچہ (old) XXXVII پرچہ (old) XXXVIII پرچہ (old) XXXIX پرچہ (old) XL پرچہ (old) XLI پرچہ (old) XLII پرچہ (old) XLIII پرچہ (old) XLIV پرچہ (old) XLV پرچہ (old) XLVI پرچہ (old) XLVII پرچہ (old) XLVIII پرچہ (old) XLIX پرچہ (old) L پرچہ (old) LI پرچہ (old) LII پرچہ (old) LIII پرچہ (old) LIV پرچہ (old) LV پرچہ (old) LVI پرچہ (old) LVII پرچہ (old) LVIII پرچہ (old) LIX پرچہ (old) LX پرچہ (old) LXI پرچہ (old) LXII پرچہ (old) LXIII پرچہ (old) LXIV پرچہ (old) LXV پرچہ (old) LXVI پرچہ (old) LXVII پرچہ (old) LXVIII پرچہ (old) LXIX پرچہ (old) LXX پرچہ (old) LXXI پرچہ (old) LXXII پرچہ (old) LXXIII پرچہ (old) LXXIV پرچہ (old) LXXV پرچہ (old) LXXVI پرچہ (old) LXXVII پرچہ (old) LXXVIII پرچہ (old) LXXIX پرچہ (old) LXXX پرچہ (old) LXXXI پرچہ (old) LXXXII پرچہ (old) LXXXIII پرچہ (old) LXXXIV پرچہ (old) LXXXV پرچہ (old) LXXXVI پرچہ (old) LXXXVII پرچہ (old) LXXXVIII پرچہ (old) LXXXIX پرچہ (old) LXXXX پرچہ (old) LXXXXI پرچہ (old) LXXXXII پرچہ (old) LXXXXIII پرچہ (old) LXXXXIV پرچہ (old) LXXXXV پرچہ (old) LXXXXVI پرچہ (old) LXXXXVII پرچہ (old) LXXXXVIII پرچہ (old) LXXXXIX پرچہ (old) LXXXXX پرچہ (old) LXXXXXI پرچہ (old) LXXXXXII پرچہ (old) LXXXXXIII پرچہ (old) LXXXXXIV پرچہ (old) LXXXXXV پرچہ (old) LXXXXXVI پرچہ (old) LXXXXXVII پرچہ (old) LXXXXXVIII پرچہ (old) LXXXXXIX پرچہ (old) LXXXXXX پرچہ (old) LXXXXXXI پرچہ (old) LXXXXXXII پرچہ (old) LXXXXXXIII پرچہ (old) LXXXXXXIV پرچہ (old) LXXXXXXV پرچہ (old) LXXXXXXVI پرچہ (old) LXXXXXXVII پرچہ (old) LXXXXXXVIII پرچہ (old) LXXXXXXIX پرچہ (old) LXXXXXXX پرچہ (old) LXXXXXXXI پرچہ (old) LXXXXXXXII پرچہ (old) LXXXXXXXIII پرچہ (old) LXXXXXXXIV پرچہ (old) LXXXXXXXV پرچہ (old) LXXXXXXXVI پرچہ (old) LXXXXXXXVII پرچہ (old) LXXXXXXXVIII پرچہ (old) LXXXXXXXIX پرچہ (old) LXXXXXXXI

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Re-Checked By: ہم نے درج بالا سوالات پرچہ (old) I (old) II پرچہ (old) III پرچہ (old) IV پرچہ (old) V پرچہ (old) VI پرچہ (old) VII پرچہ (old) VIII پرچہ (old) IX پرچہ (old) X پرچہ (old) XI پرچہ (old) XII پرچہ (old) XIII پرچہ (old) XIV پرچہ (old) XV پرچہ (old) XVI پرچہ (old) XVII پرچہ (old) XVIII پرچہ (old) XIX پرچہ (old) XX پرچہ (old) XXI پرچہ (old) XXII پرچہ (old) XXIII پرچہ (old) XXIV پرچہ (old) XXV پرچہ (old) XXVI پرچہ (old) XXVII پرچہ (old) XXVIII پرچہ (old) XXIX پرچہ (old) XXX پرچہ (old) XXXI پرچہ (old) XXXII پرچہ (old) XXXIII پرچہ (old) XXXIV پرچہ (old) XXXV پرچہ (old) XXXVI پرچہ (old) XXXVII پرچہ (old) XXXVIII پرچہ (old) XXXIX پرچہ (old) XL پرچہ (old) XLI پرچہ (old) XLII پرچہ (old) XLIII پرچہ (old) XLIV پرچہ (old) XLV پرچہ (old) XLVI پرچہ (old) XLVII پرچہ (old) XLVIII پرچہ (old) XLIX پرچہ (old) L پرچہ (old) LI پرچہ (old) LII پرچہ (old) LIII پرچہ (old) LIV پرچہ (old) LV پرچہ (old) LVI پرچہ (old) LVII پرچہ (old) LVIII پرچہ (old) LIX پرچہ (old) LX پرچہ (old) LXI پرچہ (old) LXII پرچہ (old) LXIII پرچہ (old) LXIV پرچہ (old) LXV پرچہ (old) LXVI پرچہ (old) LXVII پرچہ (old) LXVIII پرچہ (old) LXIX پرچہ (old) LXX پرچہ (old) LXXI پرچہ (old) LXXII پرچہ (old) LXXIII پرچہ (old) LXXIV پرچہ (old) LXXV پرچہ (old) LXXVI پرچہ (old) LXXVII پرچہ (old) LXXVIII پرچہ (old) LXXIX پرچہ (old) LXXX پرچہ (old) LXXXI پرچہ (old) LXXXII پرچہ (old) LXXXIII پرچہ (old) LXXXIV پرچہ (old) LXXXV پرچہ (old) LXXXVI پرچہ (old) LXXXVII پرچہ (old) LXXXVIII پرچہ (old) LXXXIX پرچہ (old) LXXXX پرچہ (old) LXXXXI پرچہ (old) LXXXXII پرچہ (old) LXXXXIII پرچہ (old) LXXXXIV پرچہ (old) LXXXXV پرچہ (old) LXXXXVI پرچہ (old) LXXXXVII پرچہ (old) LXXXXVIII پرچہ (old) LXXXXIX پرچہ (old) LXXXXX پرچہ (old) LXXXXXI پرچہ (old) LXXXXXII پرچہ (old) LXXXXXIII پرچہ (old) LXXXXXIV پرچہ (old) LXXXXXV پرچہ (old) LXXXXXVI پرچہ (old) LXXXXXVII پرچہ (old) LXXXXXVIII پرچہ (old) LXXXXXIX پرچہ (old) LXXXXXX پرچہ (old) LXXXXXXI پرچہ (old) LXXXXXXII پرچہ (old) LXXXXXXIII پرچہ (old) LXXXXXXIV پرچہ (old) LXXXXXXV پرچہ (old) LXXXXXXVI پرچہ (old) LXXXXXXVII پرچہ (old) LXXXXXXVIII پرچہ (old) LXXXXXXIX پرچہ (old) LXXXXXXX پرچہ (old) LXXXXXXXI پرچہ (old) LXXXXXXXII پرچہ (old) LXXXXXXXIII پرچہ (old) LXXXXXXXIV پرچہ (old) LXXXXXXXV پرچہ (old) LXXXXXXXVI پرچہ (old) LXXXXXXXVII پرچہ (old) LXXXXXXXVIII پرچہ (old) LXXXXXXXIX پرچہ (old) LXXXXXXXI

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2	DR. M. JAVED	SSS	G.H.S.S 138/10 - R	03226171679	

INTERMEDIATE PART-I (11 th Class)		2026 (1 st -A)	Roll No:
MATHEMATICS (OLD COURSE) PAPER-I		GROUP-II	
TIME ALLOWED: 2.30 Hours		SUBJECTIVE	
		MAXIMUM MARKS: 80	
NOTE: Write same question number and its parts number on answer book, as given in the question paper.			
SECTION-I			
2. Attempt any eight parts.			8 × 2 = 16
(i)	Define rational number.	(ii)	Find the multiplicative inverse of (−4, 7)
(iii)	Write the power set of $B = \{1, 2, 3\}$	(iv)	Write the set in set builder notation $\{100, 101, 102, \dots, 400\}$
(v)	If $A = \begin{bmatrix} i & 0 \\ 1 & -i \end{bmatrix}$, show that $A^4 = I_2$	(vi)	Find the inverse of $\begin{bmatrix} -2 & 3 \\ -4 & 5 \end{bmatrix}$
(vii)	Find x and y if $\begin{bmatrix} x+3 & 1 \\ -3 & 3y-4 \end{bmatrix} = \begin{bmatrix} 2 & 1 \\ -3 & 2 \end{bmatrix}$		
(viii)	If A is symmetric or skew symmetric, show that A^2 is symmetric.		
(ix)	Solve $x^{-2} - 10 = 3x^{-1}$	(x)	Show that sum of cube roots of unity is zero.
(xi)	If α, β are the roots of $x^2 - px - p - c = 0$ prove that $(1 + \alpha)(1 + \beta) = 1 - c$		
(xii)	Show that the roots of the equation $(p + q)x^2 - px - q = 0$ will be rational.		
3. Attempt any eight parts.			8 × 2 = 16
(i)	Define the term identity with example.	(ii)	Define proper fraction with example.
(iii)	Resolve into partial fraction $\frac{(x^2 + 1)}{(x + 1)(x - 1)}$	(iv)	Find the fifth term of the G.P 3, 6, 12,
(v)	If 5 is H.M between 2 and b , find b	(vi)	Find first four terms if $a_n = (n + 1)a_{n-1}$, $a_1 = 1$
(vii)	Sum the series $-3 + (-1) + 1 + 3 + \dots + a_{16}$	(viii)	Write into factorial form $(n + 2)(n + 1)(n)$
(ix)	How many 5-digit multiples of 5 can be formed from the digits 2, 3, 5, 7, 9, when no one is repeated?		
(x)	How many diagonals can be formed by a polygon of 5 sides?		
(xi)	Expand upto 4 terms, the infinite series $(1 + 2x)^{-1}$		
(xii)	Check for $n = 3$, $1 + 4 + 7 + \dots + (3n - 2) = \frac{n(3n - 1)}{2}$		
4. Attempt any nine parts.			9 × 2 = 18
(i)	Prove that $\cos \theta + \tan \theta \sin \theta = \sec \theta$	(ii)	If $\tan^2 45^\circ - \cos^2 60^\circ = x \sin 45^\circ \cos 45^\circ \tan 60^\circ$ find x
(iii)	Find ℓ if $\theta = 55^\circ 20'$, $r = 18 \text{ mm}$	(iv)	Prove that $\tan(45^\circ + A) \tan(45^\circ - A) = 1$
(v)	If α, β, γ are angles of $\triangle ABC$, then show that $\sin(\alpha + \beta) = \sin \gamma$		
(vi)	If $\sin \alpha = \frac{12}{13}$ $0 < \alpha < \frac{\pi}{2}$ find $\sin 2\alpha$		
(vii)	Find the period of $\cos 2x$	(viii)	Write the Law of Sines.
(ix)	Solve $\triangle ABC$ if $b = 125$, $\gamma = 53^\circ$, $\alpha = 47^\circ$		
(x)	The area of $\triangle ABC$ is 2437. If $a = 79$, $c = 97$, then find angle β		
(xi)	Prove that $r_1 r_2 r_3 = rs^2$	(xii)	Show that $\cos^{-1} \frac{4}{5} = \cot^{-1} \frac{4}{3}$
(xiii)	Solve $\sec x = -2$ $x \in (0, 2\pi)$		
SECTION-II			
NOTE: Attempt any three questions.			3 × 10 = 30
5.(a)	Solve the system of linear equations by Cramer's rule: $\begin{cases} 2x + 2y + z = 3 \\ 3x - 2y - 2z = 1 \\ 5x + y - 3z = 2 \end{cases}$	(b)	Solve equation $3x^2 + 2x - \sqrt{3x^2 + 2x - 1} = 3$
6.(a)	Resolve into Partial fractions. $\frac{x^2 + 1}{x^3 + 1}$		
(b)	Find the numbers greater than 23000 that can be formed from the digits 1, 2, 3, 5, 6, without repeating any digit.		
7.(a)	Find n so that $\frac{a^n + b^n}{a^{n-1} + b^{n-1}}$ may be the A.M between a and b		
(b)	Find the 6 th term in the expansion of $\left(x^2 - \frac{3}{2x}\right)^{10}$		
8.(a)	If $\operatorname{cosec} \theta = \frac{m^2 + 1}{2m}$ and $m > 0$ ($0 < \theta < \frac{\pi}{2}$), find the values of the remaining trigonometric ratios.		
(b)	If α, β, γ are the angles of $\triangle ABC$ then show that $\cot \frac{\alpha}{2} + \cot \frac{\beta}{2} + \cot \frac{\gamma}{2} = \cot \frac{\alpha}{2} \cot \frac{\beta}{2} \cot \frac{\gamma}{2}$		
9.(a)	Prove that $r_1 + r_2 + r_3 - r = 4R$		
(b)	Prove that $\sin^{-1} \frac{77}{85} - \sin^{-1} \frac{3}{5} = \cos^{-1} \frac{15}{17}$		

PAPER CODE: 6192		2026 (1st-A)		Roll No: _____	
MATHEMATICS (OLD COURSE) PAPER-I		INTERMEDIATE PART-I (11 th Class)		GROUP-II	
TIME ALLOWED: 30 Minutes		OBJECTIVE		MAXIMUM MARKS: 20	
Q.No.1	You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question.				
S.#	QUESTIONS	A	B	C	D
1	The number $\sqrt{2}$ is an/a:	Rational	Natural	Integer	Irrational ✓
2	A set is called well-defined collection of:	Distinct objects ✓	Identical objects	Numbers only	Variables only
3	A rectangular array of numbers enclosed by a pair of brackets is called:	Determinant	Matrix ✓	Vector	Set
4	A matrix has m – rows and n – columns, its order is:	$n \times m$	$m + n$	$m \times n$ ✓	mn
5	An equation of the form $ax^2 + bx + c = 0$; $a \neq 0$ is called:	Quadratic ✓	Linear	Cubic	Radical
6	The number of roots of quadratic equation are:	1	4	3	2 ✓
7	To make perfect square the expression, $x^2 - 5x$ we add:	5^2	$5/2$	$(5/2)^2$ ✓	2×5
8	A sequence is a function whose domain is the set of:	Natural numbers	Real numbers	Integers	Complex numbers
9	The n th term of an Arithmetic progression is $a_n =$	$a_1 + nr$	$a_1 d^{n-1}$	$a_1 + (n+1)d$	$a_1 + (n-1)d$
10	The value of $0!$ is defined as:	0	1 ✓	∞	-1
11	$n! > 2^{n-1}$ is true for integral values of $n \geq$:	1	2	3	0 ✓
12	In binomial expansion of $(a + x)^n$, the number of terms is:	$n + 1$	n	$n - 1$	$2n$
13	An angle is positive if the rotation is:	Clockwise	Horizontal	Anti-clockwise	Vertical
14	$\sin(180^\circ - \theta) =$	$-\sin \theta$	$\sin \theta$	$\cos \theta$	$-\cos \theta$
15	$\tan 2\alpha =$	$\frac{2 \tan \alpha}{1 + \tan^2 \alpha}$	$2 \tan \alpha$	$\frac{\tan \alpha}{1 - \tan^2 \alpha}$	$\frac{2 \tan \alpha}{1 - \tan^2 \alpha}$
16	The domain of $\sin x =$	$[-1, 1]$	$(-\infty, \infty)$	$[0, \infty)$	$[0, 2\pi]$
17	The triangle which is not a right triangle is called an/a:	Rectangle	Isosceles triangle	Oblique triangle	Right triangle
18	The value of s in a triangle is:	$a + b + c$	$(a + b + c)/2$	$abc/2$	$(a + b + c)/3$
19	The value of $\sin^{-1}(1/2) =$	$\pi/6$	$\pi/3$	$\pi/4$	$2\pi/3$
20	For $\sin x = 0$, the solution is:	$2n\pi/5$	$n\pi/2$	$(2n+1)\pi/2$	$n\pi$

PAPER CODE: 6194		2026 (1st-A)		Roll No: _____	
MATHEMATICS (OLD COURSE)		INTERMEDIATE PART-I (11 th Class)		PAPER-I GROUP-II	
TIME ALLOWED: 30 Minutes		OBJECTIVE		MAXIMUM MARKS: 20	
Q.No.1	You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question.				
S.#	QUESTIONS	A	B	C	D
1	The number of roots of quadratic equation are:	1	4	3	2
2	To make perfect square the expression, $x^2 - 5x$, we add:	5^2	$\frac{5}{2}$	$\left(\frac{5}{2}\right)^2$	2×5
3	A sequence is a function whose domain is the set of:	Natural numbers	Real numbers	Integers	Complex numbers
4	The nth term of an Arithmetic progression is $a_n =$	$a_1 + nr$	$a_1 d^{n-1}$	$a_1 + (n+1)d$	$a_1 + (n-1)d$
5	The value of $0!$ is defined as:	0	1	∞	-1
6	$n! > 2^{n-1}$ is true for integral values of $n \geq$:	1	2	3	0
7	In binomial expansion of $(a+x)^n$, the number of terms is:	$n+1$	n	$n-1$	$2n$
8	An angle is positive if the rotation is:	Clockwise	Horizontal	Anti-clockwise	Vertical
9	$\sin(180^\circ - \theta) =$	$-\sin \theta$	$\sin \theta$	$\cos \theta$	$-\cos \theta$
10	$\tan 2\alpha =$	$\frac{2 \tan \alpha}{1 + \tan^2 \alpha}$	$2 \tan \alpha$	$\frac{\tan \alpha}{1 - \tan^2 \alpha}$	$\frac{2 \tan \alpha}{1 - \tan^2 \alpha}$
11	The domain of $\sin x =$	$[-1, 1]$	$(-\infty, \infty)$	$[0, \infty)$	$[0, 2\pi]$
12	The triangle which is not a right triangle is called an/a:	Rectangle	Isosceles triangle	Oblique triangle	Right triangle
13	The value of s in a triangle is:	$a+b+c$	$(a+b+c)/2$	$abc/2$	$(a+b+c)/3$
14	The value of $\sin^{-1}\left(\frac{1}{2}\right) =$	$\pi/6$	$\pi/3$	$\pi/4$	$2\pi/3$
15	For $\sin x = 0$, the solution is:	$2n\pi/5$	$n\pi/2$	$(2n+1)\pi/2$	$n\pi$
16	The number $\sqrt{2}$ is an/a:	Rational	Natural	Integer	Irrational
17	A set is called well-defined collection of:	Distinct objects	Identical objects	Numbers only	Variables only
18	A rectangular array of numbers enclosed by a pair of brackets is called:	Determinant	Matrix	Vector	Set
19	A matrix has m - rows and n - columns, its order is:	$n \times m$	$m + n$	$m \times n$	mn
20	An equation of the form $ax^2 + bx + c = 0$; $a \neq 0$ is called:	Quadratic	Linear	Cubic	Radical

PAPER CODE: 6196		2026 (1st-A)		Roll No: _____	
MATHEMATICS (OLD COURSE) PAPER-I		INTERMEDIATE PART-I (11th Class)		GROUP-II	
TIME ALLOWED: 30 Minutes		OBJECTIVE		MAXIMUM MARKS: 20	
Q.No.1	You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question.				
S.#	QUESTIONS	A	B	C	D
1	The domain of $\sin x =$	$[-1, 1]$	$(-\infty, \infty)$	$[0, \infty)$	$[0, 2\pi]$
2	The triangle which is not a right triangle is called an/a:	Rectangle	Isosceles triangle	Oblique triangle	Right triangle
3	The value of s in a triangle is:	$a + b + c$	$(a + b + c)/2$	$abc/2$	$(a + b + c)/3$
4	The value of $\sin^{-1}(1/2) =$	$\pi/6$	$\pi/3$	$\pi/4$	$2\pi/3$
5	For $\sin x = 0$, the solution is:	$2n\pi/5$	$n\pi/2$	$(2n+1)\pi/2$	$n\pi$
6	The number $\sqrt{2}$ is an/a:	Rational	Natural	Integer	Irrational
7	A set is called well-defined collection of:	Distinct objects	Identical objects	Numbers only	Variables only
8	A rectangular array of numbers enclosed by a pair of brackets is called:	Determinant	Matrix	Vector	Set
9	A matrix has m -- rows and n -- columns, its order is:	$n \times m$	$m + n$	$m \times n$	mn
10	An equation of the form $ax^2 + bx + c = 0$; $a \neq 0$ is called:	Quadratic	Linear	Cubic	Radical
11	The number of roots of quadratic equation are:	1	4	3	2
12	To make perfect square the expression, $x^2 - 5x$, we add:	5^2	$5/2$	$(5/2)^2$	2×5
13	A sequence is a function whose domain is the set of:	Natural numbers	Real numbers	Integers	Complex numbers
14	The n th term of an Arithmetic progression is $a_n =$	$a_1 + nr$	$a_1 d^{n-1}$	$a_1 + (n+1)d$	$a_1 + (n-1)d$
15	The value of $0!$ is defined as:	0	1	∞	-1
16	$n! > 2^{n-1}$ is true for integral values of $n \geq$:	1	2	3	0
17	In binomial expansion of $(a + x)^n$, the number of terms is:	$n + 1$	n	$n - 1$	$2n$
18	An angle is positive if the rotation is:	Clockwise	Horizontal	Anti-clockwise	Vertical
19	$\sin(180^\circ - \theta) =$	$-\sin \theta$	$\sin \theta$	$\cos \theta$	$-\cos \theta$
20	$\tan 2\alpha =$	$\frac{2 \tan \alpha}{1 + \tan^2 \alpha}$	$2 \tan \alpha$	$\frac{\tan \alpha}{1 - \tan^2 \alpha}$	$\frac{2 \tan \alpha}{1 - \tan^2 \alpha}$

PAPER CODE: 6198		2026 (1st-A)		Roll No: _____	
MATHEMATICS (OLD COURSE) PAPER-I		INTERMEDIATE PART-I (11 th Class)		GROUP-II	
TIME ALLOWED: 30 Minutes		OBJECTIVE		MAXIMUM MARKS: 20	
Q.No.1	You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question.				
S.#	QUESTIONS	A	B	C	D
1	$n! > 2^{n-1}$ is true for integral values of $n \geq$:	1	2	3	0
2	In binomial expansion of $(a + x)^n$, the number of terms is:	$n + 1$	n	$n - 1$	$2n$
3	An angle is positive if the rotation is:	Clockwise	Horizontal	Anti-clockwise	Vertical
4	$\sin(180^\circ - \theta) =$	$-\sin \theta$	$\sin \theta$	$\cos \theta$	$-\cos \theta$
5	$\tan 2\alpha =$	$\frac{2 \tan \alpha}{1 + \tan^2 \alpha}$	$2 \tan \alpha$	$\frac{\tan \alpha}{1 - \tan^2 \alpha}$	$\frac{2 \tan \alpha}{1 - \tan^2 \alpha}$
6	The domain of $\sin x =$	$[-1, 1]$	$(-\infty, \infty)$	$[0, \infty)$	$[0, 2\pi]$
7	The triangle which is not a right triangle is called an/a:	Rectangle	Isosceles triangle	Oblique triangle	Right triangle
8	The value of s in a triangle is:	$a + b + c$	$(a + b + c)/2$	$abc/2$	$(a + b + c)/3$
9	The value of $\sin^{-1}(1/2) =$	$\pi/6$	$\pi/3$	$\pi/4$	$2\pi/3$
10	For $\sin x = 0$, the solution is:	$2n\pi/5$	$n\pi/2$	$(2n+1)\pi/2$	$n\pi$
11	The number $\sqrt{2}$ is an/a:	Rational	Natural	Integer	Irrational
12	A set is called well-defined collection of:	Distinct objects	Identical objects	Numbers only	Variables only
13	A rectangular array of numbers enclosed by a pair of brackets is called:	Determinant	Matrix	Vector	Set
14	A matrix has m – rows and n – columns, its order is:	$n \times m$	$m + n$	$m \times n$	$m n$
15	An equation of the form $ax^2 + bx + c = 0$; $a \neq 0$ is called:	Quadratic	Linear	Cubic	Radical
16	The number of roots of quadratic equation are:	1	4	3	2
17	To make perfect square the expression, $x^2 - 5x$, we add:	5^2	$5/2$	$(5/2)^2$	2×5
18	A sequence is a function whose domain is the set of:	Natural numbers	Real numbers	Integers	Complex numbers
19	The n th term of an Arithmetic progression is $a_n =$	$a_1 + nr$	$a_1 d^{n-1}$	$a_1 + (n+1)d$	$a_1 + (n-1)d$
20	The value of $0!$ is defined as:	0	1	∞	-1