

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

Name of Subject: Mathematics - 2nd Year Group: I

Q. Nos	Paper Code	Correct Answer	Paper Code	Correct Answer	Paper Code	Correct Answer	Paper Code	Correct Answer
	4191		4193		4195		4197	
1	D	not defined	C	$5x \cos \theta + 5y \sin \theta = 25$	B	$\frac{1}{\sqrt{2}}$	B	$\frac{1}{\sqrt{2}}$
2	B	$1 - \tanh^2 x$	B	$(-3, 0)$	D	$-\frac{1}{\tan^2 x}$	C	$-4/3$
3	A	12/10/04	A	$(\pm a, 0)$	B	$\ln \sin x $	A	Centroid
4	C	$\sqrt{2}$	C	$\frac{1}{\sqrt{2}}, \frac{3}{\sqrt{2}}, \frac{4}{\sqrt{2}}$	A	$-\frac{(x^2 + y^2)}{4}$	B	Below the line
5	A	$y'' + y = 0$	A	3	C	$x \ln x - x$	A	Parabola
6	B	$\frac{1}{\sqrt{2}}$	D	not defined	B	$\frac{1}{\sqrt{2}}$	C	$5x \cos \theta + 5y \sin \theta = 25$
7	D	$\frac{1}{\tan^2 x}$	B	$1 - \tanh^2 x$	C	$-4/3$	B	$(3, 0)$
8	B	$\ln \sin x $	A	12/10/04	A	centroid	A	$(\pm a, 0)$
9	A	$\frac{(x^2 + y^2)}{4}$	C	$\sqrt{2}$	B	below the line	C	$\frac{1}{\sqrt{2}}, \frac{3}{\sqrt{2}}, \frac{4}{\sqrt{2}}$
10	C	$x \ln x - x$	A	$y'' + y = 0$	A	Parabola	A	3
11	B	$\frac{1}{\sqrt{2}}$	B	$\frac{1}{\sqrt{2}}$	C	$5x \cos \theta + 5y \sin \theta = 25$	D	not defined
12	C	$-4/3$	D	$\frac{1}{\tan^2 x}$	B	$(3, 0)$	B	$1 - \tanh^2 x$
13	A	centroid	B	$\ln \sin x $	A	$(\pm a, 0)$	A	12/10/04
14	B	below the line	A	$-\frac{(x^2 + y^2)}{4}$	C	$\frac{1}{\sqrt{2}}, \frac{3}{\sqrt{2}}, \frac{4}{\sqrt{2}}$	C	$\sqrt{2}$
15	A	Parabola	C	$x \ln x - x$	A	3	A	$y'' + y = 0$
16	C	$5x \cos \theta + 5y \sin \theta = 25$	B	$\frac{1}{\sqrt{2}}$	D	not defined	B	$\frac{1}{\sqrt{2}}$
17	B	$(3, 0)$	C	$-\frac{4}{3}$	B	$1 - \tanh^2 x$	D	$\frac{1}{\tan^2 x}$
18	A	$(\pm a, 0)$	A	centroid	A	12/10/04	B	$\ln \sin x $
19	C	$\frac{1}{\sqrt{2}}, \frac{3}{\sqrt{2}}, \frac{4}{\sqrt{2}}$	B	below the line	C	$\sqrt{2}$	A	$\frac{(x^2 + y^2)}{4}$
20	A	3	A	Parabola	A	$y'' + y = 0$	C	$x \ln x - x$
Cross Check	A B C D		A B C D		A B C D		A B C D	
Total	7652		7652		7652		7652	

سرٹیفکیٹ ثابت قیام سوالیہ پرچہ امارنگ

ہم نے مضمون 1/1 پرچہ I گروپ I انٹرمیڈیٹ پہلا سالانہ امتحان 2026 کا سوالیہ پرچہ اشائیہ و معروضی (Subjective & Objective) کو نظر ثانی 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 مارنگ ہدایات / مارنگ سکیم / Rubrics بھی تیار کر دی گئی ہیں۔

Prepared & Checked By:

Dated:

S.#	Name	Designation	Institution	Mobile No	Signature
1	Hafiz M. IRSHAD	A.P.	Govt Graduate College Civil Engineering	0300 731 974	
2	Haz Nawaz	SSS	G.H.S.S. Lar Multan	0300 718 7136	
3	DR. M. JAVED AHAR	SSS	G.H.S.S. 138/10-R	0322 617 1679	
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Re-Checked By ہم نے درج بالا سوالیہ پرچہ (اشائیہ + معروضی) معروضی "Key" اور ہدایات کے حوالے سے مکمل طور پر تلی کر لی ہے۔ کسی قسم کی کوئی غلطی نہ ہے۔

1	Nighat Yasmin	A.P.	Govt Graduate College (W), Chungi No. 14, Multan	0331 7039467	Nighat
2	M. Adnan Anwar	A.P.	Govt. Lab. Nighat H.S.S. and Islamia Graduate College Multan	0304 708089	Adnan

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

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Name of Subject: Mathematics - 2nd Year Group: II

Q. Nos	Paper Code	Correct Answer	Paper Code	Correct Answer	Paper Code	Correct Answer	Paper Code	Correct Answer
1	4192	$\sqrt{2}$	4194	$27e^{3n}$	4196	$-3/4$	4198	$b^2 = c^2 - a^2$
2	A	$R - \{-3\}$	A	$-\frac{1}{5} \cos 5x$	B	$x = -3$	B	$e = 1$
3	C	$\frac{1}{2n}$	B	$\ln(x+2)$	D	$>$	A	$-ab$
4	B	$-a^3y$	A, B, C, D	$F \cdot C$	A	$(1, 1)$	B	$2\pi/3$
5	A	$\frac{1}{1-x}$	B	$\frac{1}{2} \ln(2x-1)$	C	Parabola	D	0
6	C	$27e^{3n}$	B	$-3/4$	B	$b^2 = c^2 - a^2$	A	$\sqrt{2}$
7	A	$-\frac{1}{5} \cos 5x$	B	$x = -3$	A	$e = 1$	C	$R - \{-3\}$
8	C	$\ln(x+2)$	D	$>$	B	$-ab$	B	$\frac{1}{2n}$
9	B	$-a^3y$	A	$(1, 1)$	D	$2\pi/3$	A	$-a^3y$
10	A, B, C, D	$F \cdot C$	C	Parabola	D	0	C	$\frac{1}{1-x}$
11	B	$\frac{1}{2} \ln(2x-1)$	B	$b^2 = c^2 - a^2$	A	$\sqrt{2}$	A	$27e^{3n}$
12	B	$-3/4$	A	$e = 1$	C	$R - \{-3\}$	C	$-\frac{1}{5} \cos 5x$
13	B	$x = -3$	B	$-ab$	B	$\frac{1}{2n}$	B	$\ln(x+2)$
14	D	$>$	D	$2\pi/3$	A	$-a^3y$	A, B, C, D	$F \cdot C$
15	A	$(1, 1)$	D	0	C	$\frac{1}{1-x}$	B	$\frac{1}{2} \ln(2x-1)$
16	C	Parabola	A	$\sqrt{2}$	A	$27e^{3n}$	B	$-3/4$
17	B	$b^2 = c^2 - a^2$	C	$R - \{-3\}$	C	$-\frac{1}{5} \cos 5x$	B	$x = -3$
18	A	$e = 1$	B	$\frac{1}{2n}$	B	$\ln(x+2)$	D	$>$
19	B	$-ab$	A	$-a^3y$	A, B, C, D	$F \cdot C$	A	$(1, 1)$
20	D	$2\pi/3$	C	$\frac{1}{1-x}$	B	$\frac{1}{2} \ln(2x-1)$	C	Parabola
20	D	0	C	$\frac{1}{1-x}$	B	$\frac{1}{2} \ln(2x-1)$	C	Parabola
Cross Check	A B C D		A B C D		A B C D		A B C D	
Total	6743		6743		6743		6743	

سرٹیفکیٹ بابت صحیح سوالیہ پرچہ مارکنگ Key

ہم نے مضمون (یا کسی) پرچہ II --- گروپ II --- انٹرمیڈیٹ پہلا سالانہ امتحان 2026 کا سوالیہ پرچہ انشائیہ و معروضی (Subjective & Objective) کو بنظر 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 سکیم / Rubrics بھی تیار کر دی گئی ہیں۔

Prepared & Checked By:

Dated:

S.#	Name	Designation	Institution	Mobile No	Signature
1	Hafiz M. IRSHAD	A.P	Govt. Graduate College Civil Lines Multan	23007331924	
2	Hafiz NAWAZ	SSS	GHSS Lar Multan	03007187736	
3	DR. M. JAVED KHAN	SSS	GHSS 138/10-R	03226171679	
4	M. Asif	A.P.	G.G College of Science Multan	03008682996	
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Re-Checked By ہم نے درج بالا سوالیہ پرچہ (انشائیہ + معروضی) "Key" اور ہدایات کے حوالہ سے مکمل طور پر قسماً قسماً چیک کیا ہے۔ کسی قسم کی کوئی غلطی نہ ہے۔

1	M. Adnan Anwar	A.P	Govt. Wazirpur Hussain Islamia Graduate College	03047080319	
2	Nighat Yamin	A.P	Govt. Graduate College (W), Chungi No. 14, Multan	03317039467	

تاریخ

INTERMEDIATE PART-II (12 th Class)		2026 (1 st -A)		Roll No: _____	
MATHEMATICS PAPER-II 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 even and odd function.	(ii)	Find domain and range of f , if $f(x) = \sqrt{x^2 - 9}$		
(iii)	Prove that $\cos^2 x - \sin^2 x = 1$	(iv)	Evaluate $\lim_{x \rightarrow 0} \frac{\sin x}{x}$		
(v)	Express in term of e :- $\lim_{x \rightarrow -\infty} \left(1 - \frac{1}{n}\right)^n$	(vi)	Find y_2 if $y = \sin 3x$		
(vii)	Find $\frac{dy}{dx}$, if $y = (\ln \tan h x)$	(viii)	Find $f'(x)$ if $f(x) = \ln(e^x + e^{-x})$		
(ix)	Differentiate $y = a^x$, w.r.t 'x'	(x)	Find $\frac{dy}{dx}$ if $x = y \sin y$		
(xi)	Prove that $\frac{dy}{dx} = \frac{1}{1+x^2}$, if $y = \tan^{-1} x$	(xii)	Differentiate $x^4 + 2x^3 + x^2$, w.r.t 'x'		
3. Attempt any eight parts.				8 × 2 = 16	
(i)	Using differentials, find $\frac{dy}{dx}$ if $xy + x = 4$	(ii)	Evaluate $\int \frac{3x+2}{\sqrt{x}} dx$		
(iii)	Evaluate $\int \tan^2 x dx$	(iv)	Evaluate $\int \frac{x+2}{\sqrt{x+3}} dx$		
(v)	Evaluate the definite integral $\int_1^2 (x^2 + 1) dx$	(vi)	Find the area bounded by the curve $y = x^3 + 3x^2$ and the x -axis from $x = -3$ to $x = 0$		
(vii)	Solve the differential equation $\frac{dy}{dx} = -y$	(viii)	Find the point three fifth of the way along the line segment from $A(-5, 8)$ to $B(5, 3)$		
(ix)	The xy - coordinate axes are rotated about the origin through the indicated angle. The new axes are OX' and OY' . Find the XY' - coordinates of the point P with the given xy - coordinates $P(5, 3)$; $\theta = 45^\circ$.				
(x)	Check whether the two lines $2x + y - 3 = 0$ and $4x + 2y + 5 = 0$ are parallel or perpendicular.				
(xi)	Show that the lines $4x - 3y - 8 = 0$, $3x - 4y - 6 = 0$ and $x - y - 2 = 0$ are concurrent.				
(xii)	Find the pair of straight lines represented by $2x^2 + 3xy - 5y^2 = 0$				
4. Attempt any nine parts.				9 × 2 = 18	
(i)	Define the linear inequality.	(ii)	Graph the solution set of the following linear inequality in xy - plane $2x + 1 \geq 0$		
(iii)	Find an equation of the circle with centre at $(5, -2)$ and radius 4.				
(iv)	Find the centre and radius of the circle $x^2 + y^2 + 12x - 10y = 0$				
(v)	Determine whether the point $P(-5, 6)$ lies outside, on or inside the circle $x^2 + y^2 + 4x - 6y - 12 = 0$				
(vi)	Find the focus and vertex of the parabola $y^2 = 8x$				
(vii)	Find an equation of the ellipse with vertices $(0, \pm 5)$, eccentricity $\frac{3}{5}$				
(viii)	Find the sum of the vectors $\overrightarrow{AB}$ and $\overrightarrow{CD}$ given the four points $A(1, -1)$, $B(2, 0)$, $C(-1, 3)$ and $D(-2, 2)$				
(ix)	Find a vector whose magnitude is 4 and is parallel to $2\hat{i} - 3\hat{j} + 6\hat{k}$				
(x)	Find the constant a so that the vectors $\vec{v} = \hat{i} - 3\hat{j} + 4\hat{k}$ and $\vec{w} = a\hat{i} + 9\hat{j} - 12\hat{k}$ are parallel.				
(xi)	Calculate the projection of $\vec{a}$ along $\vec{b}$ when $\vec{a} = \hat{i} - \hat{k}$, $\vec{b} = \hat{j} + \hat{k}$				
(xii)	If $\vec{u} = 2\hat{i} - \hat{j} + \hat{k}$ and $\vec{v} = 4\hat{i} + 2\hat{j} - \hat{k}$ then find the value of $\vec{v} \times \vec{u}$		(xiii)	Find the value of $3\hat{j} \cdot \hat{k} \times \hat{i}$	
SECTION-II					
NOTE: Attempt any three questions.				3 × 10 = 30	
5.(a)	Discuss the continuity of $f(x)$ at $x = -2$ if $f(x) = \begin{cases} 3x & \text{if } x \leq -2 \\ x^2 - 1 & \text{if } -2 < x < 2 \\ 3 & \text{if } x \geq 2 \end{cases}$		(b)	Differentiate $\sec^{-1}\left(\frac{x^2+1}{x^2-1}\right)$ w.r.t. 'x'	
6.(a)	Differentiate $(\ln x)^x$ w.r.t. 'x'		(b)	Evaluate $\int \tan^3 x \sec x dx$	
7.(a)	Find the area between the x - axis and the curve $y = \sqrt{2ax - x^2}$, where $a > 0$				
(b)	Minimize $z = 3x + y$ subject to the constraints $3x + 5y \geq 15$; $x + 3y \geq 9$, $x \geq 0$; $y \geq 0$				
8.(a)	Find the centre and radius of the circle with the equation $4x^2 + 4y^2 - 8x + 12y - 25 = 0$				
(b)	By means of slopes, show that the points $A(4, -5)$, $B(7, 5)$ and $C(10, 15)$ lie on the same line.				
9.(a)	Find the centre, foci, eccentricity and vertices of the ellipse. $x^2 + 16x + 4y^2 - 16y + 76 = 0$				
(b)	Prove that by vector method $\sin(\alpha - \beta) = \sin \alpha \cos \beta - \cos \alpha \sin \beta$				

INTERMEDIATE PART-II (12 th Class)		2026 (1 st -A)	Roll No:
MATHEMATICS PAPER-II 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)	Define Identity Function. Give example.		
(ii)	Show that the equations $x = a \sec \theta$, $y = b \tan \theta$ represent the equation of hyperbola $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$		
(iii)	Let $f: R \rightarrow R$ be the function, $f(x) = 2x + 1$. Find $f^{-1}(-1)$	(iv)	Evaluate $\lim_{x \rightarrow 2} \frac{\sqrt{x} - \sqrt{2}}{x - 2}$
(v)	Express limit in term of 'e' $\lim_{x \rightarrow \infty} \left(1 + \frac{3}{x}\right)^{2x}$	(vi)	Differentiate w.r. to 'x' of $\frac{x^2 + 1}{x^2 - 3}$
(vii)	Find $\frac{dy}{dx}$ if $y(x^2 - 1) = x\sqrt{x^2 + 4}$	(viii)	Differentiate w.r. to variable involved, $x^2 \sec 4x$
(ix)	If $f(x) = \ln(x + \sqrt{x^2 + 1})$, what is $f'(x)$?	(x)	Calculate y_2 , if $x^2 + y^2 + 2gx + 2fy + c = 0$
(xi)	Determine the intervals in which $f(x)$ is increasing or decreasing for the domain mentioned $f(x) = \sin x : x \in (-\pi, \pi)$		
(xii)	The perimeter of a triangle is 20 cm. If one side is of length 8 cm, what are lengths of the other two sides for maximum area of triangle?		
3. Attempt any eight parts.			8 × 2 = 16
(i)	Find dy in $y = \sqrt{x}$ when x changes from 4 to 4.41.	(ii)	Evaluate $\int x(\sqrt{x} + 1) dx$, ($x > 0$)
(iii)	Evaluate $\int \ln x dx$	(iv)	Find $\int x \cos x dx$
(v)	Evaluate $\int e^x (\cos x + \sin x) dx$	(vi)	Evaluate $\int_{\pi/6}^{\pi/3} \cos t dt$
(vii)	Solve the differential equation $\frac{dy}{dx} = \frac{y}{x^2}$, ($y > 0$)		
(viii)	Find the midpoint of the line segment joining the two points $A(-8, 3)$ and $B(2, -1)$		
(ix)	Find an equation of the line through $A(-6, 5)$ having slope 7.		
(x)	Find the point of intersection of the lines. $x + 2y + 1 = 0$ and $2x - y + 2 = 0$		
(xi)	Transform the equation $5x - 12y + 39 = 0$, into two-intercept form.		
(xii)	Check whether the point $(-7, 6)$ lies above or below the line $4x + 3y - 9 = 0$		
4. Attempt any nine parts.			9 × 2 = 18
(i)	Graph the solution set of inequality $5x - 4y \leq 20$	(ii)	Write the procedure for determining optimal solution.
(iii)	Find the centre and radius of the circle $5x^2 + 5y^2 + 24x + 36y + 10 = 0$		
(iv)	Find equation of circle with centre at $(5, -2)$ and radius 4.		
(v)	Check the position of point $(5, 6)$ with respect to circle $2x^2 + 2y^2 + 12x - 8y + 1 = 0$		
(vi)	Find vertex and directrix of the parabola $y^2 = -8(x - 3)$	(vii)	Find the eccentricity of the hyperbola $\frac{y^2}{16} - \frac{x^2}{49} = 1$
(viii)	Find the vector from the point A to the origin where $\overrightarrow{AB} = 4\hat{i} - 2\hat{j}$ and B is the point $(-2, 5)$		
(ix)	Find a vector whose magnitude is 2 and is parallel to $-\hat{i} + \hat{j} + \hat{k}$		
(x)	Determine whether the triple $30^\circ, 45^\circ, 60^\circ$ can be direction angle of the vector.		
(xi)	Find the angle between the vectors $\underline{u} = 2\hat{i} - \hat{j} + \hat{k}$ and $\underline{v} = -\hat{i} + \hat{j}$		
(xii)	Find α so that vectors $\underline{u} = 2\alpha\hat{i} + \hat{j} - \hat{k}$ and $\underline{v} = \hat{i} + \alpha\hat{j} + 4\hat{k}$ are perpendicular.		
(xiii)	If $\underline{a} \times \underline{b} = 0$ and $\underline{a} \cdot \underline{b} = 0$, what conclusion can be drawn about $\underline{a}$ or $\underline{b}$?		
SECTION-II			
NOTE: Attempt any three questions.			3 × 10 = 30
5.(a)	Evaluate the limit $\lim_{\theta \rightarrow 0} \frac{1 - \cos p\theta}{1 - \cos q\theta}$	(b)	Differentiate $\frac{\sqrt{1+x} - \sqrt{1-x}}{\sqrt{1+x} + \sqrt{1-x}}$ w.r.t. "x"
6.(a)	If $x = \sin \theta$ and $y = \sin(m\theta)$, show that $(1 - x^2)y_2 - xy_1 + m^2y = 0$	(b)	Evaluate $\int x^3 e^{5x} dx$
7.(a)	Solve the differential equation $2x^2 y \frac{dy}{dx} = x^2 - 1$	(b)	Maximize $f(x, y) = 2x + 5y$ subject to the constraints $2y - x \leq 8$, $x - y \leq 4$, $x \geq 0$, $y \geq 0$
8.(a)	Find equations of two parallel lines perpendicular to $2x - y + 3 = 0$ and the product of X - and Y -intercepts of each is 3.		
(b)	Write equations of the tangents to the circle $x^2 + y^2 - 4x + 6y + 9 = 0$ at the points on the circle whose ordinate is -2 .		
9.(a)	Find the centre, foci eccentricity and vertices of the given hyperbola $4y^2 + 12y - x^2 + 4x + 1 = 0$		
(b)	Prove that by vector method $\sin(\alpha + \beta) = \sin \alpha \cos \beta + \cos \alpha \sin \beta$		

PAPER CODE: 4191		2026 (1 st -A)		Roll No:	
MATHEMATICS PAPER-II		INTERMEDIATE PART-II (12 th Class)			
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 $f(x) = \sqrt{x+5}$ then $f(-6)$ is:	-1	1	0	Not defined
2	$\sec^2 x =$	$1 + \tanh^2 x$	$1 - \tanh^2 x$	$\tanh^2 x - 1$	$\coth^2 x - 1$
3	If $f(x) = (x^3 + 1)^6$ then $f'(-2)$ is:	1210104	-1210104	1012104	-1012104
4	$\frac{d}{dx}(\sec x)$ at $x = \pi/4$ is:	$-\sqrt{2}$	$\frac{1}{\sqrt{2}}$	$\sqrt{2}$	$\frac{-1}{\sqrt{2}}$
5	If $y = \sin x$ then:	$y'' + y = 0$	$y'' = 0$	$y'' = 1$	$y'' - y = 0$
6	The stationary values of $f(x) = x^2 - x - 2$ is:	$-1/2$	$1/2$	2	-2
7	$\frac{d}{dx}(\cos^{-1} x/a) =$	$\frac{a}{\sqrt{a^2 - x^2}}$	$\frac{-1}{\sqrt{1 - x^2}}$	$\frac{-a}{\sqrt{a^2 - x^2}}$	$\frac{-1}{\sqrt{a^2 - x^2}}$
8	$\int (\cot x) dx =$	$\ln \sec x $	$\ln \sin x $	$\ln \csc x $	$\ln \cos x $
9	$\int (x^2 + 1)x dx =$	$\frac{(x^2 + 1)^2}{4}$	$\frac{(x^2 + 1)}{2}$	$(x^2 + 1)^2$	$\frac{x^2 + 1}{4}$
10	$\int \ln x dx =$	$x \ln x + x$	$\ln x + x$	$x \ln x - x$	$\ln x - x$
11	$\int_0^{\pi/4} \cos x dx =$	$\frac{1}{\sqrt{2}}$	$\frac{1}{\sqrt{2}}$	$\frac{-1}{\sqrt{2}} + 1$	$\frac{-1}{\sqrt{2}} - 1$
12	The slope of the line perpendicular to $3x - 4y - 3 = 0$ is:	$3/4$	$-3/4$	$-4/3$	$4/3$
13	The point of intersection of the three medians of a triangle is:	Centroid	Circum centre	In-centre	Orthocenter
14	The point (5, 8) lies	On the line $2x - 3y + 6 = 0$	Below the line $2x - 3y + 6 = 0$	Above the line $2x - 3y + 6 = 0$	Both B and C
15	$x^2 = 4ay$ is the equation of:	Parabola	Circle	Ellipse	Hyperbola
16	The equation of the tangent to the circle $x^2 + y^2 = 25$ at $(5\cos\theta, 5\sin\theta)$ is:	$5x + 5y = 25$	$5x\sin\theta + 5y\cos\theta = 25$	$5x\cos\theta + 5y\sin\theta = 25$	$x + y = 25$
17	The vertex of the parabola $y^2 = -8(x - 3)$ is:	(0, 3)	(3, 0)	(-3, 0)	(0, -3)
18	The covertices of the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ with $b > a$:	$(\pm a, 0)$	$(0, \pm b)$	(a, b)	$(-a, -b)$
19	The direction cosines of $\underline{v} = \underline{i} - 3\underline{j} + 4\underline{k}$ are:	$\frac{1}{\sqrt{26}}, \frac{3}{\sqrt{26}}, \frac{4}{\sqrt{26}}$	$\frac{-1}{\sqrt{26}}, \frac{-3}{\sqrt{26}}, \frac{4}{\sqrt{26}}$	$\frac{1}{\sqrt{26}}, \frac{-3}{\sqrt{26}}, \frac{4}{\sqrt{26}}$	$\frac{-1}{\sqrt{26}}, \frac{3}{\sqrt{26}}, \frac{4}{\sqrt{26}}$
20	The value of $3\underline{j} \cdot \underline{k} \times \underline{i}$ is:	3	-3	0	1

PAPER CODE: 4193		2026 (1 st -A)		Roll No:	
MATHEMATICS PAPER-II		INTERMEDIATE PART-II (12 th Class)			
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	The equation of the tangent to the circle $x^2 + y^2 = 25$ at $(5\cos\theta, 5\sin\theta)$ is:	$5x + 5y = 25$	$5x\sin\theta + 5y\cos\theta = 25$	$5x\cos\theta + 5y\sin\theta = 25$	$x + y = 25$
2	The vertex of the parabola $y^2 = -8(x - 3)$ is:	(0, 3)	(3, 0)	(-3, 0)	(0, -3)
3	The covertices of the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ with $b > a$:	$(\pm a, 0)$	$(0, \pm b)$	(a, b)	$(-a, -b)$
4	The direction cosines of $\underline{v} = \underline{i} - 3\underline{j} + 4\underline{k}$ are:	$\frac{1}{\sqrt{26}}, \frac{3}{\sqrt{26}}, \frac{4}{\sqrt{26}}$	$\frac{-1}{\sqrt{26}}, \frac{-3}{\sqrt{26}}, \frac{4}{\sqrt{26}}$	$\frac{1}{\sqrt{26}}, \frac{-3}{\sqrt{26}}, \frac{4}{\sqrt{26}}$	$\frac{-1}{\sqrt{26}}, \frac{3}{\sqrt{26}}, \frac{4}{\sqrt{26}}$
5	The value of $3\underline{j} \cdot \underline{k} \times \underline{i}$ is:	-3	-3	0	1
6	If $f(x) = \sqrt{x+5}$ then $f(-6)$ is:	-1	1	0	Not defined
7	$\sec^2 x =$	$1 + \tanh^2 x$	$1 - \tanh^2 x$	$\tanh^2 x - 1$	$\coth^2 x - 1$
8	If $f(x) = (x^3 + 1)^6$ then $f'(-2)$ is:	1210104	-1210104	1012104	-1012104
9	$\frac{d}{dx}(\sec x)$ at $x = \frac{\pi}{4}$ is:	$-\sqrt{2}$	$\frac{1}{\sqrt{2}}$	$\sqrt{2}$	$\frac{-1}{\sqrt{2}}$
10	If $y = \sin x$ then:	$y'' + y = 0$	$y'' = 0$	$y'' = 1$	$y'' - y = 0$
11	The stationary values of $f(x) = x^2 - x - 2$ is:	$-\frac{1}{2}$	$\frac{1}{2}$	2	-2
12	$\frac{d}{dx}(\cos^{-1} \frac{x}{a}) =$	$\frac{a}{\sqrt{a^2 - x^2}}$	$\frac{-1}{\sqrt{1 - x^2}}$	$\frac{-a}{\sqrt{a^2 - x^2}}$	$\frac{-1}{\sqrt{a^2 - x^2}}$
13	$\int (\cot x) dx =$	$\ln \sec x $	$\ln \sin x $	$\ln \csc x $	$\ln \cos x $
14	$\int (x^2 + 1)x dx =$	$\frac{(x^2 + 1)^2}{4}$	$\frac{(x^2 + 1)^2}{2}$	$(x^2 + 1)^2$	$\frac{x^2 + 1}{4}$
15	$\int \ln x dx =$	$x \ln x + x$	$\ln x + x$	$x \ln x - x$	$\ln x - x$
16	$\int_0^{\frac{\pi}{4}} \cos x dx =$	$\frac{-1}{\sqrt{2}}$	$\frac{1}{\sqrt{2}}$	$\frac{-1}{\sqrt{2}} + 1$	$\frac{-1}{\sqrt{2}} - 1$
17	The slope of the line perpendicular to $3x - 4y - 3 = 0$ is:	$\frac{3}{4}$	$-\frac{3}{4}$	$-\frac{4}{3}$	$\frac{4}{3}$
18	The point of intersection of the three medians of a triangle is:	Centroid	Circum centre	In-centre	Orthocenter
19	The point (5, 8) lies:	On the line $2x - 3y + 6 = 0$	Below the line $2x - 3y + 6 = 0$	Above the line $2x - 3y + 6 = 0$	Both B and C
20	$x^2 = 4ay$ is the equation of:	Parabola	Circle	Ellipse	Hyperbola

PAPER CODE: 4195		2026 (1 st -A)		Roll No:	
		INTERMEDIATE PART-II (12 th Class)			
MATHEMATICS PAPER-II 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	The stationary values of $f(x) = x^2 - x - 2$ is:	$-\frac{1}{2}$	$\frac{1}{2}$	2	-2
2	$\frac{d}{dx}(\cos^{-1} x/a) =$	$\frac{a}{\sqrt{a^2 - x^2}}$	$\frac{-1}{\sqrt{1 - x^2}}$	$\frac{-a}{\sqrt{a^2 - x^2}}$	$\frac{-1}{\sqrt{a^2 - x^2}}$
3	$\int (\cot x) dx =$	$\ln \sec x $	$\ln \sin x $	$\ln \operatorname{cosec} x $	$\ln \cos x $
4	$\int (x^2 + 1)x dx =$	$\frac{(x^2 + 1)^2}{4}$	$\frac{(x^2 + 1)^2}{2}$	$\frac{(x^2 + 1)^2}{2}$	$\frac{x^2 + 1}{4}$
5	$\int \ln x dx =$	$x \ln x + x$	$\ln x + x$	$x \ln x - x$	$\ln x - x$
6	$\int_0^{\pi/4} \cos x dx =$	$\frac{-1}{\sqrt{2}}$	$\frac{1}{\sqrt{2}}$	$\frac{-1}{\sqrt{2}} + 1$	$\frac{-1}{\sqrt{2}} - 1$
7	The slope of the line perpendicular to $3x - 4y - 3 = 0$ is:	$\frac{3}{4}$	$-\frac{3}{4}$	$-\frac{4}{3}$	$\frac{4}{3}$
8	The point of intersection of the three medians of a triangle is:	Centroid	Circum centre	In-centre	Orthocenter
9	The point (5, 8) lies:	On the line $2x - 3y + 6 = 0$	Below the line $2x - 3y + 6 = 0$	Above the line $2x - 3y + 6 = 0$	Both B and C
10	$x^2 = 4ay$ is the equation of:	Parabola	Circle	Ellipse	Hyperbola
11	The equation of the tangent to the circle $x^2 + y^2 = 25$ at $(5 \cos \theta, 5 \sin \theta)$ is:	$5x + 5y = 25$	$5x \sin \theta + 5y \cos \theta = 25$	$5x \cos \theta + 5y \sin \theta = 25$	$x + y = 25$
12	The vertex of the parabola $y^2 = -8(x - 3)$ is:	(0, 3)	(3, 0)	(-3, 0)	(0, -3)
13	The covertices of the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ with $b > a$ are:	$(\pm a, 0)$	$(0, \pm b)$	(a, b)	$(-a, -b)$
14	The direction cosines of $\underline{v} = \underline{i} - 3\underline{j} + 4\underline{k}$ are:	$\frac{1}{\sqrt{26}}, \frac{3}{\sqrt{26}}, \frac{4}{\sqrt{26}}$	$\frac{-1}{\sqrt{26}}, \frac{-3}{\sqrt{26}}, \frac{4}{\sqrt{26}}$	$\frac{1}{\sqrt{26}}, \frac{-3}{\sqrt{26}}, \frac{4}{\sqrt{26}}$	$\frac{-1}{\sqrt{26}}, \frac{3}{\sqrt{26}}, \frac{4}{\sqrt{26}}$
15	The value of $3\underline{j} \cdot \underline{k} \times \underline{i}$ is:	3	-3	0	1
16	If $f(x) = \sqrt{x+5}$ then $f(-6)$ is:	-1	1	0	Not defined
17	$\operatorname{sech}^2 x =$	$1 + \tanh^2 x$	$1 - \tanh^2 x$	$\tanh^2 x - 1$	$\coth^2 x - 1$
18	If $f(x) = (x^3 + 1)^6$ then $f'(-2)$ is:	1210104	-1210104	1012104	-1012104
19	$\frac{d}{dx}(\sec x)$ at $x = \pi/4$ is:	$-\sqrt{2}$	$\frac{1}{\sqrt{2}}$	$\sqrt{2}$	$\frac{-1}{\sqrt{2}}$
20	If $y = \sin x$ then:	$y'' + y = 0$	$y'' = 0$	$y'' = 1$	$y'' - y = 0$

PAPER CODE: 4197		2026 (1 st -A)		Roll No:	
MATHEMATICS PAPER-II		INTERMEDIATE PART-II (12 th Class)			
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	$\int_0^{\pi/4} \cos x \, dx =$	$\frac{-1}{\sqrt{2}}$	$\frac{1}{\sqrt{2}}$	$\frac{-1}{\sqrt{2}} + 1$	$\frac{-1}{\sqrt{2}} - 1$
2	The slope of the line perpendicular to $3x - 4y - 3 = 0$ is:	$\frac{3}{4}$	$-\frac{3}{4}$	$-\frac{4}{3}$	$\frac{4}{3}$
3	The point of intersection of the three medians of a triangle is:	Centroid	Circum-centre	In-centre	Orthocenter
4	The point (5, 8) lies:	On the line $2x - 3y + 6 = 0$	Below the line $2x - 3y + 6 = 0$	Above the line $2x - 3y + 6 = 0$	Both B and C
5	$x^2 = 4ay$ is the equation of:	Parabola	Circle	Ellipse	Hyperbola
6	The equation of the tangent to the circle $x^2 + y^2 = 25$ at $(5\cos\theta, 5\sin\theta)$ is:	$5x + 5y = 25$	$5x\sin\theta + 5y\cos\theta = 25$	$5x\cos\theta + 5y\sin\theta = 25$	$x + y = 25$
7	The vertex of the parabola $y^2 = -8(x - 5)$ is:	(0, 3)	(3, 0)	(-3, 0)	(0, -3)
8	The covertices of the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ with $b > a$:	$(\pm a, 0)$	$(0, \pm b)$	(a, b)	$(-a, -b)$
9	The direction cosines of $\underline{v} = \underline{i} - 3\underline{j} + 4\underline{k}$ are:	$\frac{1}{\sqrt{26}}, \frac{3}{\sqrt{26}}, \frac{4}{\sqrt{26}}$	$\frac{-1}{\sqrt{26}}, \frac{-3}{\sqrt{26}}, \frac{4}{\sqrt{26}}$	$\frac{1}{\sqrt{26}}, \frac{-3}{\sqrt{26}}, \frac{4}{\sqrt{26}}$	$\frac{-1}{\sqrt{26}}, \frac{3}{\sqrt{26}}, \frac{4}{\sqrt{26}}$
10	The value of $3\underline{j} \cdot \underline{k} \times \underline{i}$ is:	3	-3	0	1
11	If $f(x) = \sqrt{x+5}$ then $f'(-6)$ is:	-1	1	0	Not defined
12	$\sec^2 x =$	$1 + \tanh^2 x$	$1 - \tanh^2 x$	$\tanh^2 x - 1$	$\coth^2 x - 1$
13	If $f(x) = (x^3 + 1)^6$ then $f''(-2)$ is:	1210104	-1210104	1012104	-1012104
14	$\frac{d}{dx}(\sec x)$ at $x = \pi/4$ is:	$-\sqrt{2}$	$\frac{1}{\sqrt{2}}$	$\sqrt{2}$	$\frac{-1}{\sqrt{2}}$
15	If $y = \sin x$ then:	$y'' + y = 0$	$y'' = 0$	$y'' = 1$	$y'' - y = 0$
16	The stationary values of $f(x) = x^2 - x - 2$ is:	$-1/2$	$1/2$	2	-2
17	$\frac{d}{dx}(\cos^{-1} x/a) =$	$\frac{a}{\sqrt{a^2 - x^2}}$	$\frac{-1}{\sqrt{1 - x^2}}$	$\frac{-a}{\sqrt{a^2 - x^2}}$	$\frac{-1}{\sqrt{a^2 - x^2}}$
18	$\int (\cot x) \, dx =$	$\ln \sec x $	$\ln \sin x $	$\ln \operatorname{cosec} x $	$\ln \cos x $
19	$\int (x^2 + 1)x \, dx =$	$\frac{(x^2 + 1)^2}{4}$	$\frac{(x^2 + 1)^2}{2}$	$(x^2 + 1)^2$	$\frac{x^2 + 1}{4}$
20	$\int \ln x \, dx =$	$x \ln x + x$	$\ln x + x$	$x \ln x - x$	$\ln x - x$

PAPER CODE: 4192		2026 (1 st -A)		Roll No: _____	
		INTERMEDIATE PART-II (12 th Class)			
MATHEMATICS PAPER-II		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 $f(x) = \sin x + \cos x$ then $f\left(\frac{\pi}{4}\right) =$	$\sqrt{2}$	$\frac{1}{\sqrt{2}}$	$-\sqrt{2}$	$-\frac{1}{\sqrt{2}}$
2	If $f(x) = \frac{1}{x+3}$, $x \neq -3$ then range of $f^{-1}(x)$ is:	R	$R - \{3\}$	$R - \{-3\}$	$R - \{1\}$
3	$\frac{d}{dx}(\sqrt{x}) =$	$\frac{1}{\sqrt{x}}$	$\frac{1}{2\sqrt{x}}$	$\frac{-1}{2\sqrt{x}}$	$\frac{-1}{\sqrt{x}}$
4	If $y = e^{-ax}$ then $\frac{d^3y}{dx^3}$ is:	$-a^3y$	a^3y	a^2y	$-a^2y$
5	$\frac{d}{dx}(\cot h^{-1}x)$ is:	$\frac{1}{1+x^2}$	$\frac{-1}{1+x^2}$	$\frac{1}{1-x^2}$	$\frac{-1}{1-x^2}$
6	If $y = e^{3x}$ then y_3 is:	$27e^{3x}$	$9e^{3x}$	$3e^{3x}$	e^{3x}
7	$\int \sin 5x dx =$	$-\cos 5x$	$\cos 5x$	$\frac{-1}{5}\cos 5x$	$\frac{1}{5}\cos 5x$
8	$\int \frac{1}{x+2} dx =$	$\ln x$	$\ln(x+2)$	$\frac{1}{(x+2)^2}$	$\frac{-1}{(x+2)^2}$
9	$\int (x^2-1)^{\frac{1}{2}} x dx =$	$\frac{1}{3}(x^2+1)^{\frac{3}{2}}$	$\frac{1}{2}(x^2+1)^{\frac{3}{2}}$	$\frac{-1}{2}(x^2+1)^{\frac{3}{2}}$	$\frac{-1}{3}(x^2+1)^{\frac{3}{2}}$
10	$\int \frac{1}{2x-1} dx =$	$\ln(2x-1)$	$\frac{1}{2}\ln(2x-1)$	$\frac{-1}{2}\ln(2x-1)$	$-\ln(2x-1)$
11	The slop of the line parallel to $3x+4y+7=0$ is:	$\frac{3}{4}$	$-\frac{3}{4}$	$\frac{4}{3}$	$-\frac{4}{3}$
12	The vertical line through $(-3, 6)$ is:	$x=6$	$x=-3$	$x=-6$	$x=3$
13	The distance of the point $(3, -7)$ from x -axis is:	3	-3	-7	7
14	The solution of $x+2y < 6$ is:	$(1, 1)$	$(1, 3)$	$(1, 4)$	$(1, 5)$
15	$x^2 = 4ay$ is the equation of:	Ellipse	Circle	Parabola	Hyperbola
16	In hyperbola $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$	$b^2 = a^2 + c^2$	$b^2 = c^2 - a^2$	$b^2 = a^2 - c^2$	$b^2 = a^2$
17	An parabola $y^2 = 4ax$	$e=1$	$e<1$	$e>1$	$e=0$
18	If $\underline{a}$ & $\underline{b}$ have the opposite direction then $\underline{a} \cdot \underline{b} =$	ab	$-ab$	$ab \sin \theta$	$ab \tan \theta$
19	If $\frac{\underline{a} \cdot \underline{b}}{ab} = -\frac{1}{2}$ then θ is:	$\frac{5\pi}{6}$	$\frac{\pi}{3}$	$\frac{\pi}{6}$	$\frac{2\pi}{3}$
20	For three coplaner vectors $\underline{a}$, $\underline{b}$ & $\underline{c}$ $\underline{a} \cdot \underline{b} \times \underline{c} =$	2	1	-1	0

PAPER CODE: 4194		2026 (1 st -A)		Roll No: _____	
INTERMEDIATE PART-II (12 th Class)					
MATHEMATICS PAPER-II 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 $y = e^{3x}$ then y_3 is:	$27e^{3x}$	$9e^{3x}$	$3e^{3x}$	e^{3x}
2	$\int \sin 5x \, dx =$	$-\cos 5x$	$\cos 5x$	$\frac{-1}{5} \cos 5x$	$\frac{1}{5} \cos 5x$
3	$\int \frac{1}{x+2} \, dx =$	$\ln x$	$\ln(x+2)$	$\frac{1}{(x+2)^2}$	$\frac{-1}{(x+2)^2}$
4	$\int (x^2 - 1)^{\frac{1}{2}} x \, dx =$	$\frac{1}{3}(x^2 + 1)^{\frac{3}{2}}$	$\frac{1}{2}(x^2 + 1)^{\frac{3}{2}}$	$\frac{-1}{2}(x^2 + 1)^{\frac{3}{2}}$	$\frac{-1}{3}(x^2 + 1)^{\frac{3}{2}}$
5	$\int \frac{1}{2x-1} \, dx =$	$\ln(2x-1)$	$\frac{1}{2} \ln(2x-1)$	$\frac{-1}{2} \ln(2x-1)$	$-\ln(2x-1)$
6	The slop of the line parallel to $3x + 4y + 7 = 0$ is:	$\frac{3}{4}$	$-\frac{3}{4}$	$\frac{4}{3}$	$-\frac{4}{3}$
7	The vertical line through $(-3, 6)$ is:	$x = 6$	$x = -3$	$x = -6$	$x = 3$
8	The distance of the point $(3, -7)$ from x -axis is:	3	-3	-7	7
9	The solution of $x + 2y < 6$ is:	$(1, 1)$	$(1, 3)$	$(1, 4)$	$(1, 5)$
10	$x^2 = 4ay$ is the equation of:	Ellipse	Circle	Parabola	Hyperbola
11	In hyperbola $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$	$b^2 = a^2 + c^2$	$b^2 = c^2 - a^2$	$b^2 = a^2 - c^2$	$b^2 = a^2$
12	An parabola $y^2 = 4ax$	$e = 1$	$e < 1$	$e > 1$	$e = 0$
13	If $\underline{a}$ & $\underline{b}$ have the opposite direction then $\underline{a} \cdot \underline{b} =$	ab	$-ab$	$ab \sin \theta$	$ab \tan \theta$
14	If $\frac{\underline{a} \cdot \underline{b}}{ab} = -\frac{1}{2}$ then θ is:	$\frac{5\pi}{6}$	$\frac{\pi}{3}$	$\frac{\pi}{6}$	$\frac{2\pi}{3}$
15	For three coplaner vectors $\underline{a}$, $\underline{b}$ & $\underline{c}$ $\underline{a} \cdot \underline{b} \times \underline{c} =$	2	1	-1	0
16	If $f(x) = \sin x + \cos x$ then $f\left(\frac{\pi}{4}\right) =$	$\sqrt{2}$	$\frac{1}{\sqrt{2}}$	$-\sqrt{2}$	$\frac{-1}{\sqrt{2}}$
17	If $f(x) = \frac{1}{x-3}$, $x \neq -3$ then range of $f^{-1}(x)$ is:	R	$R - \{3\}$	$R - \{-3\}$	$R - \{1\}$
18	$\frac{d}{dx}(\sqrt{x}) =$	$\frac{1}{\sqrt{x}}$	$\frac{1}{2\sqrt{x}}$	$\frac{-1}{2\sqrt{x}}$	$\frac{-1}{\sqrt{x}}$
19	If $y = e^{-ax}$ then $\frac{d^3 y}{dx^3}$ is:	$-a^3 y$	$a^3 y$	$a^2 y$	$-a^2 y$
20	$\frac{d}{dx}(\cot h^{-1} x)$ is:	$\frac{1}{1+x^2}$	$\frac{-1}{1+x^2}$	$\frac{1}{1-x^2}$	$\frac{-1}{1-x^2}$

PAPER CODE: 4196		2026 (1 st -A)			Roll No: _____
INTERMEDIATE PART-II (12 th Class)					
MATHEMATICS PAPER-II 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 slop of the line parallel to $3x + 4y + 7 = 0$ is:	$\frac{3}{4}$	$-\frac{3}{4}$	$\frac{4}{3}$	$-\frac{4}{3}$
2	The vertical line through $(-3, 6)$ is:	$x = 6$	$x = -3$	$x = -6$	$x = 3$
3	The distance of the point $(3, -7)$ from x -axis is:	3	-3	-7	7
4	The solution of $x + 2y < 6$ is:	$(1, 1)$	$(1, 3)$	$(1, 4)$	$(1, 5)$
5	$x^2 = 4ay$ is the equation of:	Ellipse	Circle	Parabola	Hyperbola
6	In hyperbola $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$	$b^2 = a^2 + c^2$	$b^2 = c^2 - a^2$	$b^2 = a^2 - c^2$	$b^2 = a^2$
7	An parabola $y^2 = 4ax$	$e = 1$	$e < 1$	$e > 1$	$e = 0$
8	If $\underline{a}$ & $\underline{b}$ have the opposite direction then $\underline{a} \cdot \underline{b} =$	ab	$-ab$	$ab \sin \theta$	$ab \tan \theta$
9	If $\frac{\underline{a} \cdot \underline{b}}{ab} = -\frac{1}{2}$ then θ is:	$\frac{5\pi}{6}$	$\frac{\pi}{3}$	$\frac{\pi}{6}$	$\frac{2\pi}{3}$
10	For three coplaner vectors $\underline{a}$, $\underline{b}$ & $\underline{c}$ $\underline{a} \cdot \underline{b} \times \underline{c} =$	2	1	-1	0
11	If $f(x) = \sin x + \cos x$ then $f\left(\frac{\pi}{4}\right) =$	$\sqrt{2}$	$\frac{1}{\sqrt{2}}$	$-\sqrt{2}$	$\frac{-1}{\sqrt{2}}$
12	If $f(x) = \frac{1}{x+3}$, $x \neq -3$ then range of $f^{-1}(x)$ is:	R	$R - \{3\}$	$R - \{-3\}$	$R - \{1\}$
13	$\frac{d}{dx}(\sqrt{x}) =$	$\frac{1}{\sqrt{x}}$	$\frac{1}{2\sqrt{x}}$	$\frac{-1}{2\sqrt{x}}$	$\frac{-1}{\sqrt{x}}$
14	If $y = e^{-ax}$ then $\frac{d^3 y}{dx^3}$ is:	$-a^3 y$	$a^3 y$	$a^2 y$	$-a^2 y$
15	$\frac{d}{dx}(\cot h^{-1} x)$ is:	$\frac{1}{1+x^2}$	$\frac{-1}{1+x^2}$	$\frac{1}{1-x^2}$	$\frac{-1}{1-x^2}$
16	If $y = e^{3x}$ then y_3 is:	$27e^{3x}$	$9e^{3x}$	$3e^{3x}$	e^{3x}
17	$\int \sin 5x dx =$	$-\cos 5x$	$\cos 5x$	$\frac{-1}{5} \cos 5x$	$\frac{1}{5} \cos 5x$
18	$\int \frac{1}{x+2} dx =$	$\ln x$	$\ln(x+2)$	$\frac{1}{(x+2)^2}$	$\frac{-1}{(x+2)^2}$
19	$\int (x^2 - 1)^{\frac{1}{2}} x dx =$	$\frac{1}{3}(x^2 + 1)^{\frac{3}{2}}$	$\frac{1}{2}(x^2 + 1)^{\frac{3}{2}}$	$\frac{-1}{2}(x^2 + 1)^{\frac{3}{2}}$	$\frac{-1}{3}(x^2 + 1)^{\frac{3}{2}}$
20	$\int \frac{1}{2x-1} dx =$	$\ln(2x-1)$	$\frac{1}{2} \ln(2x-1)$	$\frac{-1}{2} \ln(2x-1)$	$-\ln(2x-1)$

PAPER CODE: 4198		2026 (1 st -A)		Roll No:	
MATHEMATICS PAPER-II		INTERMEDIATE PART-II (12 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	In hyperbola $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$	$b^2 = a^2 + c^2$	$b^2 = c^2 - a^2$	$b^2 = a^2 - c^2$	$b^2 = a^2$
2	An parabola $y^2 = 4ax$	$e = 1$	$e < 1$	$e > 1$	$e = 0$
3	If $\underline{a}$ & $\underline{b}$ have the opposite direction then $\underline{a} \cdot \underline{b} =$	ab	$-ab$	$ab \sin \theta$	$ab \tan \theta$
4	If $\frac{\underline{a} \cdot \underline{b}}{ab} = -\frac{1}{2}$ then θ is:	$\frac{5\pi}{6}$	$\frac{\pi}{3}$	$\frac{\pi}{6}$	$\frac{2\pi}{3}$
5	For three coplaner vectors $\underline{a}$, $\underline{b}$ & $\underline{c}$ $\underline{a} \cdot \underline{b} \times \underline{c} =$	2	1	-1	0
6	If $f(x) = \sin x + \cos x$ then $f\left(\frac{\pi}{4}\right) =$	$\sqrt{2}$	$\frac{1}{\sqrt{2}}$	$-\sqrt{2}$	$\frac{-1}{\sqrt{2}}$
7	If $f(x) = \frac{1}{x+3}$, $x \neq -3$ then range of $f^{-1}(x)$ is:	R	$R - \{3\}$	$R - \{-3\}$	$R - \{1\}$
8	$\frac{d}{dx}(\sqrt{x}) =$	$\frac{1}{\sqrt{x}}$	$\frac{1}{2\sqrt{x}}$	$\frac{-1}{2\sqrt{x}}$	$\frac{-1}{\sqrt{x}}$
9	If $y = e^{-ax}$ then $\frac{d^3y}{dx^3}$ is:	$-a^3y$	a^3y	a^2y	$-a^2y$
10	$\frac{d}{dx}(\cot h^{-1}x)$ is:	$\frac{1}{1+x^2}$	$\frac{-1}{1+x^2}$	$\frac{1}{1-x^2}$	$\frac{-1}{1-x^2}$
11	If $y = e^{3x}$ then y_3 is:	$27e^{3x}$	$9e^{3x}$	$3e^{3x}$	e^{3x}
12	$\int \sin 5x dx =$	$-\cos 5x$	$\cos 5x$	$\frac{-1}{5} \cos 5x$	$\frac{1}{5} \cos 5x$
13	$\int \frac{1}{x+2} dx =$	$\ln x$	$\ln(x+2)$	$\frac{1}{(x+2)^2}$	$\frac{-1}{(x+2)^2}$
14	$\int (x^2 - 1)^{\frac{1}{2}} x dx =$	$\frac{1}{3}(x^2 + 1)^{\frac{3}{2}}$	$\frac{1}{2}(x^2 + 1)^{\frac{3}{2}}$	$\frac{-1}{2}(x^2 + 1)^{\frac{3}{2}}$	$\frac{-1}{3}(x^2 + 1)^{\frac{3}{2}}$
15	$\int \frac{1}{2x-1} dx =$	$\ln(2x-1)$	$\frac{1}{2} \ln(2x-1)$	$\frac{-1}{2} \ln(2x-1)$	$-\ln(2x-1)$
16	The slop of the line parallel to $3x + 4y + 7 = 0$ is:	$\frac{3}{4}$	$-\frac{3}{4}$	$\frac{4}{3}$	$-\frac{4}{3}$
17	The vertical line through $(-3, 6)$ is:	$x = 6$	$x = -3$	$x = -6$	$x = 3$
18	The distance of the point $(3, -7)$ from x -axis is	3	-3	-7	7
19	The solution of $x + 2y < 6$ is:	$(1, 1)$	$(1, 3)$	$(1, 4)$	$(1, 5)$
20	$x^2 = 4ay$ is the equation of:	Ellipse	Circle	Parabola	Hyperbola

16(Obj)(★ ★ ★ ★)-2026(1st-A)-15000 (MULTAN)