

Objective
Paper Code
8198

Intermediate Part Second - 136

MATHEMATICS (Objective) Group – II

Time: 30 Minutes

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 the relevant circle in front of that question number on computerized answer sheet. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero marks in that question. Attempt as many questions as given in objective type question paper and leave other circles blank.

S.#	Questions	A	B	C	D
1	(0, 0) is one of the solutions of inequality:	$3x + 4y > 4$	$2x - 3y > 4$	$x + 3y > 5$	$x - 3y > -4$
2	If a straight line is parallel to x-axis then its slope is:	-1	-1	0	∞
3	Intercepts form of equation of line is:	$y = mx + c$	$\frac{x}{a} + \frac{y}{b} = 1$	$y - y_1 = m(x - x_1)$	$x \cos \alpha + y \sin \alpha = p$
4	A linear equation in two variable represents:	Circle	Ellipse	Hyperbola	Straight line
5	Center of the circle $(x-1)^2 + (y+3)^2 = 3$ is:	(1, -3)	(-1, 3)	(-1, -3)	(1, 3)
6	Parabola $x^2 = -8y$ opens:	Rightwards	Leftwards	Upwards	Downwards
7	Length of major axis of an ellipse $\frac{(x-1)^2}{2^2} + \frac{(y+1)^2}{3^2} = 1$ is:	18	8	6	4
8	Which conies is represented by the equation $x^2 - y^2 = 4$?	Circle	Parabola	Ellipse	Hyperbola
9	Which vector is equal to vector $\underline{i} \cdot \underline{j} \times \underline{k}$?	0	1	-1	$\underline{i}$
10	The angle between the vectors $2\underline{i} + 3\underline{j} + \underline{k}$ and $2\underline{i} - \underline{j} - \underline{k}$ is:	30°	45°	60°	90°
11	If $f(x) = x^2 + \cos x$, then $f(x)$ is:	Constant function	Linear function	Odd function	Even function
12	The range of the function $y = 2 + \sqrt{x-1}$ is:	$[2, \infty)$	$[3, \infty)$	$[1, \infty)$	$[-1, \infty)$
13	$\frac{d}{dx}(\log_a x) = :$	$\frac{1}{x}$	$\frac{1}{x} \ln a$	$\frac{1}{x \ln a}$	$\frac{1}{a \ln x}$
14	$\frac{d}{dx}(e^x + e^{-x}) = :$	$2 \sinh x$	$2 \cosh x$	$\sinh x$	$\cosh x$
15	If $f(x) = 3x^2 - 2x + 1$, then $f'(0) = :$	5	-2	1	2
16	$\frac{1}{\sqrt{1+x^2}}$ is the derivative of:	$\sinh^{-1} x$	$\cosh^{-1} x$	$\tanh^{-1} x$	$\tan^{-1} x$
17	$\int \tan x \, dx = :$	$\ln \cos x + c$	$\ln \operatorname{cosec} x + c$	$\ln \sec x + c$	$\ln \cot x + c$
18	$\int_0^1 \frac{1}{1+x^2} \, dx = :$	$\frac{\pi}{4}$	$\frac{\pi}{3}$	$\frac{\pi}{2}$	$\frac{\pi}{6}$
19	$\int (\sin^2 x + \cos^2 x) \, dx = :$	$\sin x + \cos x + c$	$\sin 2x + \cos 2x + c$	$\frac{x^2}{2} + c$	$x + c$
20	Suitable substitution for $\int \sqrt{a^2 - x^2} \, dx$ is:	$x = a \sec \theta$	$x = a \sin \theta$	$x = a \tan \theta$	$x = a \cot \theta$