Paper Code		2015 (A)	Roll No: _____
Number:	**8197**	**INTERMEDIATE PART-II (12ᵗʰ CLASS)**	

MATHEMATICS PAPER-II TIME ALLOWED: 30 Minutes

GROUP-I **OBJECTIVE** MAXIMUM MARKS: 20

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) $\dfrac{d}{dx}(\tan x)$ is equal to:- (A) $\cos ec^2 x$ (B) $\tan^2 x$ (C) $\sec^2 x$ (D) $\sec x$

(2) If $f'(c)=0$ then f has relative max. value at $x=c$ if:-
(A) $f''(c)>0$ (B) $f''(c)=0$ (C) $f''(c)<0$ (D) $f''(c)\geq 0$

(3) $\displaystyle\int \dfrac{dx}{x}$ equals:- (A) x (B) $\ell n\, x$ (C) $\dfrac{1}{x^2}$ (D) $\dfrac{2}{x^2}$

(4) $\displaystyle\int \sec x\, dx$ equals:-
(A) $\sec x \tan x$ (B) $\ell n(\sec x \tan x)$ (C) $\ell n(\sec x + \tan x)$ (D) $\ell n(\sec x - \tan x)$

(5) $\displaystyle\int \dfrac{dx}{x\,\ell n\, x}$ equals:- (A) $\ell n x$ (B) x (C) $\ell n(\ell n x)$ (D) $\dfrac{(\ell n x)^2}{2}$

(6) The solution of differential equation $\dfrac{dy}{dx}=\sec^2 x$ is:-
(A) $y=\cos x$ (B) $y=\sec x$ (C) $y=\cos ec^2 x$ (D) $y=\tan x$

(7) $\displaystyle\int_0^2 dx$ equals:- (A) 2 (B) 0 (C) 4 (D) -2

(8) $\displaystyle\int_0^{½} \dfrac{dx}{\sqrt{1-x^2}}$ is equal to:- (A) $\dfrac{\pi}{4}$ (B) $\dfrac{\pi}{2}$ (C) $\dfrac{\pi}{3}$ (D) $\dfrac{\pi}{6}$

(9) The distance between $(1,2)$ and $(2,1)$ is:- (A) 1 (B) 2 (C) $\sqrt{2}$ (D) 0

(10) Intercept form of equation of line is:-
(A) $\dfrac{x}{a}+\dfrac{y}{b}=c$ (B) $\dfrac{x}{a}+\dfrac{y}{b}=1$ (C) $\dfrac{a}{x}+\dfrac{b}{y}=c$ (D) $\dfrac{x}{a}-\dfrac{y}{b}=0$

(11) The associated equation of inequality $x+2y<6$ is:-
(A) $x+2y=6$ (B) $x-2y=6$ (C) $x+2y=-6$ (D) $x-2y=-6$

(12) The centre of circle $x^2+y^2+12x-10y=0$ is:-
(A) $(6,5)$ (B) $(-6,5)$ (C) $(5,6)$ (D) $(6,-5)$

(13) The end points of the major axis of the ellipse are called its:-
(A) Focii (B) Vertices (C) Covertices (D) Directrix

(14) The unit vector of $2i+j$ is:-
(A) $2i-j$ (B) $\dfrac{2i+j}{5}$ (C) $\dfrac{2i+j}{3}$ (D) $\dfrac{2i+j}{\sqrt{5}}$

(15) If the vectors $2i+4j-7k$ and $2i+6j+xk$ are perpendicular, then x equals:-
(A) 5 (B) 4 (C) -4 (D) 2

(16) $\displaystyle\lim_{x\to 0}\dfrac{Sin x^o}{x}$ equals:- (A) $\dfrac{\pi}{180}$ (B) $\dfrac{180}{\pi}$ (C) 180π (D) 1

(17) $Cosh^2 x - Sinh^2 x$ equals:- (A) 0 (B) -1 (C) 2 (D) 1

(18) $\dfrac{d}{dx}a^x$ equals:- (A) $\dfrac{a^x}{\ell n\, a}$ (B) $\dfrac{\ell n\, a}{a^x}$ (C) $a^x \ell n\, a$ (D) a^x

(19) If $y=e^{2x}$ then y_4 equals:- (A) $16e^{2x}$ (B) $8e^{2x}$ (C) $2e^{2x}$ (D) e^{2x}

(20) $\dfrac{d}{dx}(\sin h x)$ is equal to:- (A) $-\cos h x$ (B) $\cos h x$ (C) $\tan h x$ (D) $\sec h x$