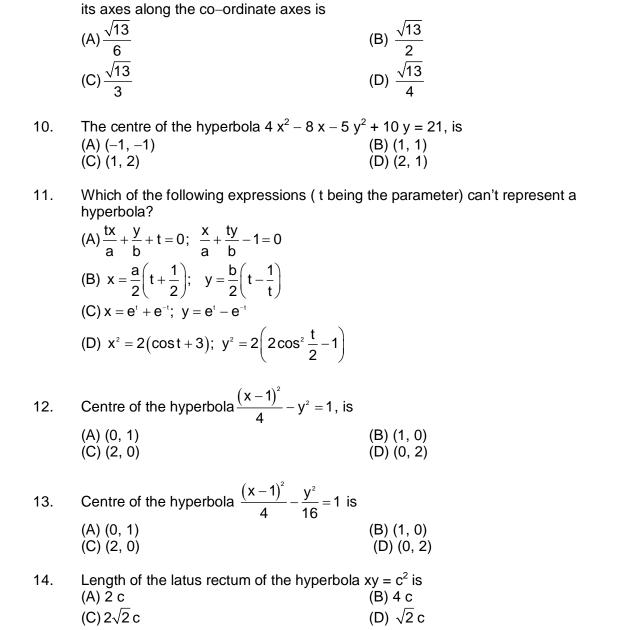
## **HYPERBOLA**

1.	If e, e' are the eccentricities of hyperbolas	$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$ and $\frac{y^2}{b^2} - \frac{x^2}{a^2} = 1$ , then
	(A) e = e'	(B) $e = -e'$
	(C) e e' = 1	(D) $\frac{1}{e^2} + \frac{1}{e'^2} = 1$
2.	Centre of the hyperbola $x^2 + 4y^2 + 6xy + 8x$ (A) (1, 1) (C) (2, 0)	x- 2y + 7 = 0 is , (B) (0, 2) (D) none of these .
3.	The eccentricity of the hyperbola $2x^2 - y^2 = 6$ (A) $\sqrt{2}$ (C) 3	6 is (B) 2 (D) $\sqrt{3}$
4.	The radius of the director circle of the hyperbola $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$ is	
	(A) a -b	(B) $\sqrt{a-b}$
	$(C)\sqrt{a^2-b^2}$	(D) $\sqrt{a^2 + b^2}$
5.	The tangent to the curve $x = a(\theta - \sin \theta)$ ; $y = 1$ , $x \in Z$ are parallel to (A) $y = x$ (C) $y = 0$	= $a(1 + \cos \theta)$ at the points $\theta = (2k + (B) y = -x (D) x = 0$
6.	The legth of latus rectum for hyperbola $\frac{x^2}{16}$	$-\frac{y^2}{9} = 1 \text{ is}$
	$(A)\frac{32}{3}$	(B) $\frac{9}{2}$
	$(C)\frac{8}{3}$	(D) none of these
7.	The straight line $y = 3x + c$ will be tangent to hyperbola $\frac{x^2}{25} - \frac{y^2}{16} = 1$ if $c^2$ is	
	equal to (A) 119	(B) 225
	(C) 209	(D) 144
8. Co-ordinates of the foci of the hyperbola $\frac{(x-1)^2}{9} - \frac{(y-2)^2}{16}$		$(x-1)^2 - \frac{(y-2)^2}{16} = 1$ are
	(A) (1, 7) and (1, -3) (C) (1, 3) and (1, -7)	(B) (6, 2) and (-4, 2) (D) None of these
		(D) HONG OF THOSE



Co-ordinates of the foci of the hyperbola:  $\frac{(x-1)^2}{16} - \frac{(y-1)^2}{9} = 1$ 

Eccentricity of the hyperbola:  $4 x^2 - 8 x - 5 y^2 + 10 y = 21$  is

(B) (1, 3) and (1, -7) (D) (-4, 2) and (6, 2)

(B)  $\frac{4}{3}$ 

The eccentricity of the hyperbola passing through (3, 0) and ( $3\sqrt{2}$ , 2) and having

9.

15.

16.

(A) (1, 7) and (1, -3)

(C) (-6, 2) and (4, 2)

 $(A)\frac{\sqrt{5}}{2}$ 

(C) 
$$\frac{3}{\sqrt{5}}$$

(D) 
$$\frac{3}{4}$$

Length of latus rectum of the hyperbola:  $4 x^2 - 8 x - 5 y^2 + 10 y = 21$  is 17.

$$(A)\frac{\sqrt{5}}{8}$$

(B)  $\frac{1}{2}$ 

(D)  $\frac{8}{\sqrt{5}}$ 

Eccentricity of the hyperbola  $\frac{(x-1)^2}{9} - \frac{(y-1)^2}{16} = 1$ ; is 18.

$$(A)\frac{5}{4}$$

(C) 
$$\frac{4}{3}$$

(D)  $\frac{3}{2}$ 

Length of latus rectum of the hyperbola;  $\frac{(x-1)^2}{9} - \frac{(y-2)^2}{16} = 1$ ; is 19.

(A) 
$$\frac{9}{2}$$

(C) 
$$\frac{7}{4}$$

(B)  $\frac{9}{4}$  (D)  $\frac{32}{2}$ 

Centre of the hyperbola  $\frac{(x-y)^2}{4} - \frac{(x+y)^2}{9} = 1$ ; is 20.

## **ANSWERS**

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 2.
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 C
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 C
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 17.
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 18.
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 19.
 D
 20.

C B B C A