Mock Test 07: Full Syllabus Exam as per CBSE Sample Paper 2025-26

ANSWER KEY

1	(c) 2	
2	(c) parabola	
_	(c) parabola	
3	(c) ±6	
4	(d) $\frac{4}{7}$	
5	$(b) \pm \frac{1}{\sqrt{3}} \left(-\hat{\iota} + \hat{\jmath} + \hat{k} \right)$	
6	(b)-24	
7	$(b)\pi/4$	
8	(c)1	
9	(d) 75	
10	(d) 2	
11	(b) a = 5, b = 2	
12	(c) 0	
13	(d) (0, 2)	
14	(b) $\pi/6$	
15	(b)90°	
16	(c) 31/32	
17	(d)8	
18	(b)Constraints	
19	(c) Assertion is correct, reason is incorrect	
20	(a) Both (A) and (R) are true and (R) is the correct explanation of (A).	
24	SECTION – B	
21	$\tan^{-1}\left\{2 \sin\left(4 \cos^{-1}\frac{\sqrt{3}}{2}\right)\right\} = \tan^{-1}\left\{2 \sin\left(4 \left(\frac{\pi}{6}\right)\right)\right\} = \tan^{-1}\left\{2 \sin\left(\frac{2\pi}{3}\right)\right\} = \sqrt{2}$	1
		1
	$= \tan^{-1} \left\{ 2 \left(\frac{\sqrt{3}}{2} \right) \right\} = \frac{\pi}{3}$	1
	OR	
	$\tan^{-1}(\tan (\pi + \frac{\pi}{6})) = \tan^{-1}(\tan (\frac{\pi}{6}))$	1
	$\frac{\pi}{6} \in \left(-\frac{\pi}{2}, \frac{\pi}{2}\right)$	
	6 (2'2)	1
22	$f(x) = 4x^3 - 6x^2 - 72x + 30$	1/2
	$f(x) = 4x^3 - 6x^2 - 72x + 30$ $f'(x) = 12x^2 - 12x - 72$	1/2
	$f'(x) = 12x^2 - 12x - 72$ For critical points $f'(x) = 0$,	1/2
	For critical points $f'(x) = 0$, $12x^2 - 12x - 72 = 0$	1/2
	12(x-3)(x+2) = 0 12(x-3)(x+2) = 0	1/2
	x = -2, x = +3	-, -
		1/2
	$(-\infty, -2)$ and $(3, \infty)$ the function is strictly increasing	-
	(-2,3) the function is strictly decreasing	
23	: We have, $y = \csc(\cot^{-1}x)$	1/2
23	$y = cosec (cosec^{-1}\sqrt{1 + x^2}) = \sqrt{1 + x^2}$	1/2
	Now, $y = \sqrt{1 + x^2}$	1/2
	$\frac{dy}{dx} = \frac{1}{2}(1+x^2)^{-\frac{1}{2}}\frac{d}{dx}(1+x^2)$,-
	WA E WA	1/2
	$\frac{dy}{dx} = \frac{1}{2\sqrt{1+x^2}} \times 2x = \frac{x}{\sqrt{1+x^2}}$	-
		1/2
	$\sqrt{1 + 2}$ ay	
	$\sqrt{1+x^2}\frac{dy}{dx}=x$	
	$\sqrt{1 + x^2} \frac{dx}{dx} = x$ $\sqrt{1 + x^2} \frac{dy}{dx} - x = 0$	

4		1/2
	Given $\overrightarrow{OA} = 2\hat{\imath} + 3\hat{J} - \hat{k}$ and $\overrightarrow{OB} = 3\hat{\imath} + 2\hat{J} + \hat{k}$ then $\overrightarrow{AB} = \overrightarrow{OB} - \overrightarrow{OA} = \hat{\imath} - \hat{J} + 2\hat{k}$	
	A Unit vector in the direction of $\overrightarrow{AB} = \frac{\overrightarrow{AB}}{ \overrightarrow{AB} } = \frac{\widehat{1-j+2k}}{\sqrt{1+1+4}} = \frac{1}{\sqrt{6}} - \frac{\widehat{J}}{\sqrt{6}} + \frac{2\widehat{k}}{\sqrt{6}}$	1
	The vector of magnitude 6 units in the direction of $\overrightarrow{AB} = 6\left(\frac{1}{\sqrt{6}} - \frac{\hat{J}}{\sqrt{6}} + \frac{2\hat{k}}{\sqrt{6}}\right)$	1/2
	\\\ \delta \\ \delta \\\ \delta \\\ \delta \\\ \delta \\\ \delta \\\ \delta \	1
.5	Ans:P(exactly one solve)= $P(A \cap B' \cap C')+P(A' \cap B \cap C')+P(A' \cap B' \cap C)$	1
	$=\frac{1}{3}\cdot\frac{5}{7}\cdot\frac{5}{8}+\frac{2}{3}\cdot\frac{2}{7}\cdot\frac{5}{8}+\frac{2}{3}\cdot\frac{5}{7}\cdot\frac{3}{8}=\frac{75}{168}$	
	$-\frac{1}{3}\cdot \frac{1}{7}\cdot \frac{1}{8} + \frac{1}{3}\cdot \frac{1}{7}\cdot \frac{1}{8} + \frac{1}{3}\cdot \frac{1}{7}\cdot \frac{1}{8} = \frac{1}{168}$	1
	SECTION – C	
26	C4	
	$\int_{1} \left[x-1 + x-2 + x-3 \right] dx$	1/2
	$\int_{1}^{4} x-1 dx + \int_{1}^{4} x-2 dx + \int_{1}^{4} x-3 dx$	
	$= \int_{1}^{4} (x-1)dx + \int_{1}^{2} -(x-2)dx + \int_{2}^{4} (x-2)dx + \int_{1}^{3} -(x-3)dx + \int_{1}^{$	
	$\int_3^4 (x+3) dx$	1
	For calculation	1
	$\int_{1}^{4} [x-1 + x-2 + x-3] dx = \frac{19}{2}$	4 /0
	$\int_{1}^{1} \left[x - 1 + x - 2 + x - 3 \right] dx = \frac{1}{2}$	1/2
7		
		1

	$I = \int \frac{6x+7}{\sqrt{(x-5)(x-4)}} dx = \int \frac{6x+7}{\sqrt{x^2-9x+20}} dx$	
	$\int \sqrt{(x-5)(x-4)} \int \sqrt{x^2-9x+20}$ Let $6x+7=A\frac{d}{dx}(x^2-9x+20)+B$	1
	u.	•
	$6x + 7 = A(2x - 9) + B \dots (1)$ Comparing the x coefficients: $2A = 6 \Rightarrow A = 3$	
	Comparing the constants: $-9A + B = 7 \Rightarrow B = 34$	1
	: $I = \int \frac{6x+7}{\sqrt{(x-5)(x-4)}} dx = \int \frac{3(2x-9)+34}{\sqrt{x^2-9x+20}} dx$	
	$=3\int \frac{2x-9}{\sqrt{x^2-9x+20}}\ dx + 34\int \frac{1}{\sqrt{x^2-9x+20}}\ dx$	
	$I_1 = 3 \int \frac{2x - 9}{\sqrt{x^2 - 9x + 20}} dx = \frac{6}{2} \int \frac{2x - 9}{\sqrt{x^2 - 9x + 20}} dx = 6\sqrt{x^2 - 9x + 20}$	
	$I_2 = 34 \int \frac{1}{\sqrt{x^2 - 9x + 20}} dx = 34 \int \frac{1}{\sqrt{\left(x - \frac{9}{2}\right)^2 - \frac{81}{4} + 20}} dx$	
	$I_2 = 34 \int \frac{1}{\sqrt{\left(x - \frac{9}{2}\right)^2 - \frac{1}{4}}} dx = 34 \log \left x - \frac{9}{2} + \sqrt{x^2 - 9x + 20} \right + c$	
	$1 = 6\sqrt{x^2 - 9x + 20} + 34\log\left x - \frac{9}{2} + \sqrt{x^2 - 9x + 20}\right + c$	
28		
	5	
	$8(0,3)^{\frac{4}{3}}$ $c(\frac{20}{19},\frac{45}{19})$	
	2 (19.19)	2
	A(2,0) A (2,0) 1 2 3 4 5 6 7 8 X $3x+5y=15$	1/2
	Corner points (0,0), (0,3), (2,0), (20/19, 45/19)	-
	Max. of Z = 235/19, at (20/19, 45/19)	1/2
29		
	Given $\vec{a} = 2\hat{i} + 2\hat{j} + 3\hat{k}$ $\vec{b} = -\hat{i} + 2\hat{j} + \hat{k}$ $\vec{c} = 3\hat{i} + \hat{j}$	1
	$\vec{a} + \lambda \vec{b} = 2\hat{i} + 2\hat{j} + 3\hat{k} + \lambda(-\hat{i} + 2\hat{j} + \hat{k}) = (2 - \lambda)\hat{i} + (2 + 2\lambda)\hat{j} + (3 + \lambda)\hat{k}$	1
	$\vec{a} + \lambda \vec{b}$ is perpendicular to $\vec{c} \Rightarrow (\vec{a} + \lambda \vec{b})$. $\vec{c} = 0$	
	$(3)(2-\lambda) + (1)(2+2\lambda) + (0)(3+\lambda) = 0 \Rightarrow 6-3\lambda+2+2\lambda = 0 \Rightarrow \lambda = 8$	1
	Or	
	Given $ \vec{a} = 1$, $ \vec{b} = 1$, $ \vec{a} = \vec{a} \vec{a} \cos 0^\circ = \vec{a} ^2 = a^2$	
	$ \vec{a} - \vec{b} ^2 = \vec{a} ^2 + \vec{b} ^2 - 2\vec{a} \cdot \vec{b}$	
	$=(1)^2+(1)^2-2 \vec{a} \vec{b} \cos\theta$	
	$= 1 + 1 - 2 (1)(1) \cos\theta$	
	$=2(1-\cos\theta)$	
	$=2\left(2\operatorname{Sin}^{2}\frac{\theta}{2}\right)$	
	$ \vec{a} - \vec{b} = 2 \sin \frac{\theta}{2}$	
	Therefore, $Sin\left(\frac{\theta}{2}\right) = \frac{1}{2} \vec{a} - \vec{b} $	
	(2) 21	

Volume of cone = $\frac{1}{3}\pi r^2 h = \pi r^3$ $\frac{dv}{dt} = 3\pi r^2 \cdot \frac{dr}{dt} \text{ substituting values we get } \frac{dr}{dt} = \frac{1}{\pi}$ OR $f(x) = \frac{4\sin x}{2 + \cos x} - x$ $f'(x) = \frac{(2 + \cos x) 4 \cos x - 4 \sin x (-\sin x)}{(2 + \cos x)^2} - 1$ $f'(x) = \frac{8\cos x + 4 \cos^2 x + 4\sin^2 x - 4 - \cos^2 x - 4\cos x}{(2 + \cos x)^2}$ $f'(x) = \frac{\cos x (4 - \cos x)}{(2 + \cos x)^2}$ For all $x \in (0, \frac{\pi}{2}]$, $\cos x \ge 0$ and $4 - \cos x \ge 0$ for all $x \in R$ $f'(x) \text{ is positive}$ $f(x) \text{ is increasing for all } x \in [0, \frac{\pi}{2}]$	30	Given $\frac{dv}{dt} = 12$, and $h = 3r$	
$\frac{dv}{dt} = 3\pi r^2 \cdot \frac{dr}{dt} \text{ substituting values we gel} \frac{dr}{dt} = \frac{1}{\pi}$ OR $f(x) = \frac{4 \sin x}{2 + \cos x} - x$ $f'(x) = \frac{(2 + \cos x) 4 \cos x - 4 \sin x (-\sin x)}{(2 + \cos x)^2} - 1$ $f'(x) = \frac{\cos x (4 + \cos^2 x + 4 \sin^2 x - 4 - \cos^2 x - 4 \cos x)}{(2 + \cos x)^2}$ $f'(x) = \frac{\cos x (4 + \cos^2 x + 4 \sin^2 x - 4 - \cos^2 x - 4 \cos x)}{(2 + \cos x)^2}$ For all $x \in (0, \frac{\pi}{2}]$, $\cos x \ge 0$ and $4 - \cos x \ge 0$ for all $x \in R$ $f'(x) \text{ is positive}$ $f(x) \text{ is increasing for all } x \in [0, \frac{\pi}{2}]$ $\frac{x^2(1 + y) = y^2(1 + x) \Rightarrow x^2 - y^2 = y^2x - x^2y}{(x + y)(x - y) = -xy (x - y) \Rightarrow x + y = -xy}$ $x = -y - xy \Rightarrow y(1 + x) = -x$ $y = \frac{x}{1 + x}$ $\frac{dy}{dx} = -\frac{\left(\frac{(1 + x) \times 1 - x(0 + 1)}{(1 + x)^2}\right)}{\frac{dy}{dx}} = -\frac{1}{(1 + x)^2}$ $\frac{dy}{dx} = -\frac{1}{(1 + x)^2}$ $\frac{dy}{dx} = -\frac{1}{(1 + x)^2}$ 1 SECTION – D	-	***	1
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For all $x \in (0, \frac{\pi}{2}]$, $\cos x \ge 0$ and $4 - \cos x \ge 0$ for all $x \in R$ $f'(x) \text{ is positive}$ $f(x) \text{ is increasing for all } x \in [0, \frac{\pi}{2}]$ We have, $x\sqrt{1+y} + y\sqrt{1+x} = 0 \implies x\sqrt{1+y} = -y\sqrt{1+x}$ $x^2(1+y) = y^2(1+x) \implies x^2 - y^2 = y^2x - x^2y$ $(x+y)(x-y) = -xy(x-y) \implies x+y = -xy$ $y = -y - xy \implies y(1+x) = -x$ $y = -\frac{1}{1+x} = [since, x \ne y]$ $\frac{dy}{dx} = -\frac{1}{(1+x)^2}$ $\frac{dy}{dx} = -\frac{1}{(1+x)^2}$ 1 SECTION - D		$f'(x) = \frac{8\cos x + 4\cos^2 x + 4\sin^2 x - 4 - \cos^2 x - 4\cos x}{(2 + \cos x)^2}$	
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AN EDUCATIONAL INSTITUTE 1 SECTION - D Fig 1m			1
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SECTION – D Fig 1m			1
Fig 1m			1
1m		SECTION – D	F'-
1	32		
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	Given: $x^2 + y^2 = 9 \dots (1)$ $x = 1, x = 2$		1
	$x = 1 \dots (2)$ $x = 2 \dots (3)$		
	Required Area =		1
	$= 2 \int_{1}^{2} [\sqrt{9 - x^{2}}] dx$		1
	$= 2\left[\frac{x}{2}\sqrt{9-x^2} + \frac{9}{2}Sin^{-1}\frac{x}{3}\right]_1^2$		1
			•
	$=2\left[\sqrt{9-4}+\frac{9}{2}Sin^{-1}\frac{2}{3}-\frac{1}{2}\sqrt{9-1}-\frac{9}{2}Sin^{-1}\frac{1}{3}\right]^{2}$		
	$= 2\sqrt{5} + 9\sin^{-1}\frac{2}{3} - (2\sqrt{2}) - 9\sin^{-1}\frac{1}{3}$		
	3 (272) 35111 3		
33	To prove reflexive		1 1
	To prove symmetric		1
	To prove transitive To prove equivalence	-	1 1
	Proving T ₁ related with T ₃ $\frac{3}{6} = \frac{4}{8} = \frac{5}{10}$	10	
	OR Showing one one		
	Taking cases, x_1,x_2 both are even , x_1,x_2 both are odd and x_1,x_2 one	e is odd	3
	another is even Showing onto by any method		
			2
	יות די וידי ווידי	7	
34		/	1/2
	Given point $(2, 4, -1)$	A (2,4,-1)	
	Given line $\frac{x+5}{1} = \frac{y+3}{4} = \frac{z-6}{-9}$		
	Let $\frac{x+5}{1} = \frac{y+3}{4} = \frac{z-6}{-9} = k$	D	
	Any Point on given line D (k-5, 4k-3, -9k+6)		1/2
		$B(\alpha,\beta,\gamma)$	E
	DRs of AD: $x_2 - x_1$, $y_2 - y_1$, $z_2 - z_1$		1
	k-5-2, 4k-3-4, -9k+6+1		
	k-7, 4k-7, -9k+7		1/2
	DRs of the given line $\frac{x+5}{1} = \frac{y+3}{4} = \frac{z-6}{-9}$ are 1, 4, -9		
	AD is perpendicular to given line: $a_1 a_2 + b_1 b_2 + c_1 c_2 = 0$		1
	1(k-7) + 4(4k-7) +(-9) (-9k+7)		
	k - 7 + 16k - 28 + 81k - 63 = 0		_
	$98k - 98 = 0 \implies k = 1$		1/2

Substitute k=1 in D then

Foot of the perpendicular = D(-4, 1, -3)

Let $B(\alpha, \beta, \gamma)$ be the image of A

Then mid-point of AB = D

$$\left(\frac{\alpha+2}{2}, \frac{\beta+4}{2}, \frac{\gamma-1}{2}\right) = (-4, 1, -3)$$

$$\frac{\alpha+2}{2} = -4$$
, $\alpha+2 = -8$, $\alpha = -10$

$$\frac{\beta+4}{2}=1 \qquad \beta+4=2 \qquad \beta=-2$$

$$\frac{\gamma-1}{2} = -3 \qquad \qquad \gamma - 1 = -6 \qquad \qquad \gamma = -5$$

Image = B (-10, -2, -5)

OR

The equations of the given lines are

$$\vec{r} = (1-t)\hat{i} + (2-t)\hat{j} + (3-2t)\hat{k} & \vec{r} = (s+1)\hat{i} + (2s-1)\hat{j} - (2s+1)\hat{k}$$

After writing standard equation of a line, then we have

$$\vec{r} = \hat{i} - 2\hat{j} + 3\hat{k} + t(-\hat{i} + \hat{j} - 2\hat{k})$$
 & $\vec{r} = \hat{i} - \hat{j} - \hat{k} + s(\hat{i} + 2\hat{j} - 2\hat{k})$

Shortest Distance between the lines = $\frac{\left| (\overrightarrow{a_2} - \overrightarrow{a_1}) \cdot (\overrightarrow{b_1} \times \overrightarrow{b_2}) \right|}{\left| \overrightarrow{b_1} \times \overrightarrow{b_1} \right|}$

$$\overrightarrow{a_1} = \hat{\imath} - 2\hat{J} + 3\hat{k} \qquad \overrightarrow{a_2} = \hat{\imath} - \hat{J} - \hat{k} \qquad \overrightarrow{a_2} - \overrightarrow{a_1} = 0\hat{\imath} + \hat{J} - 4\hat{k}$$

$$\overrightarrow{b_1} \ = -\hat{\imath} + \hat{J} - 2\hat{k} \qquad \overrightarrow{b_2} = \ \hat{\imath} + 2\hat{J} - 2\hat{k}$$

$$\overrightarrow{b_1} \times \overrightarrow{b_2} = \begin{vmatrix} \hat{i} & \hat{j} & \hat{k} \\ -1 & 1 & -2 \\ 1 & 2 & -2 \end{vmatrix} = \hat{i}(-2+4) - \hat{j}(2+2) + \hat{k}(-2-1) = 2\hat{i} - 4\hat{j} - 3\hat{k}$$

$$|\overrightarrow{b_1} \times \overrightarrow{b_2}| = \sqrt{4 + 16 + 9} = \sqrt{29}$$

$$SD = \frac{|(\overrightarrow{a_2} - \overrightarrow{a_1}) \cdot (\overrightarrow{b_1} \times \overrightarrow{b_2})|}{|\overrightarrow{b_1} \times \overrightarrow{b_2}|} = \left| \frac{(0!+J-4\overrightarrow{k}) \cdot (2!-4J-3\overrightarrow{k})}{\sqrt{29}} \right|$$

$$SD = \left| \frac{(0)(2)+(1)(-4)+(-4)(-3)}{\sqrt{29}} \right| = \left| \frac{-4+12}{\sqrt{29}} \right| = \frac{8}{\sqrt{29}} = \frac{8\sqrt{29}}{29}$$



1/2





1/2

1.5

1/2





1

1

1

Given differential equation is $\tan x \frac{dy}{dx} = 2x \tan x + x^2 - y$

$$\Rightarrow \frac{dy}{dx} = 2x + \frac{x^2}{\tan x} - \frac{y}{\tan x} \qquad \Rightarrow \frac{dy}{dx} + \frac{1}{\tan x}y = 2x + x^2 \cot x$$

$$\Rightarrow \frac{dy}{dx} + (\cot x)y = 2x + x^2 \cot x$$

This is a linear differential equation of the form

$$\frac{dy}{dx} + Py = Q.$$

Here
$$P = \cot x$$
, $Q = 2x + x^2 \cot x$

Integrating factor = $e^{\int pdx} = e^{\int cotx dx} = e^{log (sinx)} = sinx$

The solution of the linear differential equation is given by

$$y(I.F) = \int [Q.(I.F)] dx + C$$

y.
$$sinx = \int (2x + x^2 cot x) sinx dx + C$$

$$\Rightarrow$$
 y. $\sin x = \int 2x \sin x \, dx + \int x^2 \cos x \, dx + C$

 \Rightarrow y. $\sin x = \int 2x \sin x \, dx + x^2 \sin x - \int 2x \sin x \, dx$ (Using integration by parts)

$$\Rightarrow$$
 y. $sinx = x^2 sinx + C---(1)$

Pg. 6

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	Given that $y = 0$ when $x = \frac{\pi}{2}$.		
	Putting $x = \frac{\pi}{2}$ and $y = 0$ in eqn(1) we get		
	$0 = \frac{\pi^2}{4} + C \Rightarrow C = \frac{-\pi^2}{4}$		
	Therefore particular solution of the given differential equation is		
	y. $\sin x = x^2 \sin x - \frac{\pi^2}{4}$ $\Rightarrow 4y \sin x = 4x^2 \sin x - \pi^2$		
	$y. \sin x - x \sin x - \frac{1}{4}$ $\Rightarrow 4y \sin x - 4x \sin x - x$	1	
	SECTION –E		
36	Let the increase of Tu in annual subscription of T 200 mayiming the		
	Let the increase of ₹ x in annual subscription of ₹ 300 maximize the profit of the company. Due to this increase of ₹ x, x subscriber will		
	discontinue. Therefore		
	Number of subscriber = 500-x		
	Annual subscription = ₹ (300+x) R be the total revenue =(500-x)(300+x) =1500+200x-x ²		
		2	
	$\frac{dR}{dx} = 200 - 2x \text{ and } \frac{d^2R}{dx^2} = -2$	2	
	For critical point $\frac{dR}{dx} = 200 - 2x = 0$, x = 100		
	$\frac{d^2R}{dx^2}$ < 0 at x = 100	2	
	So R is maximum at x=100 and maximum revenue = 400x400₹=160000₹	_	
37		1	
	(i) $(10+x)\sqrt{(100-x^2)}$		
	$-2x^2-10x+100$		
	(ii) $\frac{-2x^2 - 10x + 100}{\sqrt{100 - x^2}}$		
	$(iii)(A) \frac{dA}{dx} = 0$		
	ax		
	$\frac{-2x^2 - 10x + 100}{\sqrt{100 - x^2}} = 0 \implies -2x^2 - 10x + 100 = 0$	1	
	$\frac{1}{\sqrt{100-x^2}} = 0 \implies -2x^2 - 10x + 100 = 0$		
	$\Rightarrow x^2 + 5x - 50 = 0 \Rightarrow (x + 10)(x - 5) = 0$		
		2	
	$\Rightarrow x = 5$		
	** * * * * * * * * * * * * * * * * * * *		
	THIMIT DEVIAND		
	OR		
	(iii)B- maximum volume $v = (10+x)\sqrt{(100-x^2)}$		
	$= (10 + 5)\sqrt{100 - 25} = 15\sqrt{75}$		
	NALINSTITUT		
	= 75√3 sq. m	llarens.	
38			
		2	
	$=\frac{3}{40},\frac{1}{4}+\frac{1}{5},\frac{1}{4}+\frac{1}{10},\frac{1}{10}+\frac{2}{5},\frac{1}{10}=\frac{114}{100}$		
	10 4 5 3 10 12 5 10 600		
	(b) $P(B/E) = P(B).P(E/B) = 1/15 = 40/114 = 20/57$		
	(b) $\Gamma(D/E) = \frac{114/600}{114/600} = \frac{40/114 = 20/5}{114/600}$	2	
	1(L) 1147 000		
38	(a) A: Cab B: Metro C: Bike D: other E: Late arrival $P(E) = P(A).P(E/A) + P(B).P(E/B) + P(C).P(E/C) + P(D).P(E/D)$ $= \frac{3}{10}.\frac{1}{4} + \frac{1}{5}.\frac{1}{3} + \frac{1}{10}.\frac{1}{12} + \frac{2}{5}.\frac{1}{10} = \frac{114}{600}$ (b) $P(B/E) = \frac{P(B).P(E/B)}{P(E)} = \frac{1/15}{114/600} = 40/114 = 20/57$		