CE-PHY-11-P28



## HKCEE PHYSICS

2011 H	KCEE Physics Pa	aper II		
 Sı	<b>iggested Solution</b>	S		
		Prepared by	Andy	Lai 🥌

MC 係分 ABC Grade 既地方,

越出越煩, 越出越深,

同學一定要快又要好小心!



Enrollment Hotline: 6772 3001 Website: <u>www.andylai.hk</u> MSN: <u>mrandylai@hotmail.com</u> Address: Rm706, Prosper Commercial Building, 9 Yin Chong Street, Mong Kok, Kowloon, Hong Kong.

1.	С	2.	Α	3.	В	4.	Α	5.	С
6.	D	7.	С	8.	Α	9.	В	10.	D
11.	Α	12.	С	13.	Α	14.	В	15.	С
16.	D	17.	D	18.	В	19.	D	20.	Α
21.	В	22.	Α	23.	D	24.	С	25.	В
26.	С	27.	D	28.	Α	29.	С	30.	D
31.	В	32.	С	33.	С	34.	В	35.	В
36.	С	37.	С	38.	D	39.	В	40.	D
41.	Α	42.	Α	43.	В	44.	D	45.	Α

## **2011 HKCEE Physics Paper II Suggested Answers**

Secti	ion A	
1.	С	黎 Sir 提提你 <sup>6</sup> : 1. Acceleration due to gravity = - 10 meter per second square, which is
		<ol> <li>Given u: initial velocity, v: final velocity, a: acceleration, s: displacement, t: time taken.</li> </ol>
		3. If u, a, s are the same, the t and v is also the same.
		Remarks: Did you remember Galileo throws the bomb and feather in Pisa Tower? They land on nearly the same time!

2.	A	黎 Sir 提提你
		Statement 1 is true.
		1. Loss in K.E. at P + Loss in P.E. at P = Gain in K.E. at R
		Statement 2 is true.
		1. Point Q and point S are in the same horizontal level.
		Statement 3 is false.
		1. The ball can reach point T since the K.E. at P is not zero, some of the K.E. at
		P can make it go above initial height.
		2. If the K.E. at P is zero, this statement is correct.

3.	В	黎 Sir 提提你 😌:			
		1. The weight of the man = $500 \text{ N}$			
		2. Reading of the balance = Normal reaction acting on the man			
		Statement 1 is false.			
		1. From t = 0s to t = 3s, Net Force on the man = $500 - 400 = 100$ N (Downward)			
		Statement 2 is false.			
		1. Initially, the life is moving down with acceleration.			
		2. At $t = 3s$ , the reading of the balance = 500 N = Weight of the man.			
		3. The net force acting on the man $= 0$ N.			
		4. Therefore, the lift should be moving with constant velocity downward.			
		Statement 3 is true.			
		1. Initially, The life is moving down.			
		2. From $t = 0s$ to $t = 3s$ , Reading of the balance = 500 N = Weight of the man.			
		3. The net force acting on the man $= 0$ N.			
		4. Therefore, the lift should be moving with constant velocity.			

4.	A	黎 Sir 提提你 <sup>©</sup> :
		<b>1.</b> By Newton's second law, $F_{net} = ma$
		2. 100 = 50a which gives $a = 2 m s^{-1}$

5.	С	黎 Sir 提提你 💮 :
		1. If F = 25 N, the block remains at rest, which can only prove that the friction is not less than 25 N, but we do not know the friction if it is larger than 25 N.
		2. Friction is a passive force which will can only be equal or less than the applied force to oppose the motion.

6.	D	黎 Sir 提提你 😇:
		Statement 1 is true.
		1. There are two forces acting on the ant
		i. The force acting on the ant by the ceiling (upwards)
		ii. The force acting on the ant by the metal block (downwards)
		Statement 2 is wrong.
		<b>1.</b> Action and reaction pair should be: $F_{A \text{ on } B} = F_{B \text{ on } A}$ .
		2. Force acting on the block by the ant (Action) = Force acting on the ant by the block (Reaction)
		3. Weight of the block = Force acting on the block by the Earth (Action)
		= Force acting on the Earth by the block (Reaction)
		Statement 3 is true.
		1. By Newton's first law, Net Force = Zero then the ant remains at state of rest.
1		

7. C  
黎 Sir 提提你 ④:  
1. K.E. = 
$$\frac{1}{2}mv^2$$
  
2. When  $t^2 = 5$  s, K.E. = 15000 J which gives  
3. By  $a = \frac{v - u}{t}$  gives  $a = (\sqrt{20} - 0)/\sqrt{5} = 2 m s^{-2}$ 



9. B 察 Sir 提提你 <sup>(C)</sup>:
1. Law of conservation of energy, Energy lost by water = Energy gained by ice.
2. (1)(4200)(60-40) = 0.15(1) + 0.15(4200)(40-0)
3. 1 = 3.92×10<sup>5</sup> J kg<sup>-1</sup>

10.	D	黎 Sir 提提你 <sup>@</sup> :
		1. The temperature of the surrounding should be the same as 20 $^{\circ}C$ since the temperature at last is only 20 $^{\circ}C$ .
		2. Between P and Q, ice is absorbing latent heat of fusion from water.
		3. Between P and Q, the temperature of ice is constant and equal to Zero degree.
		4. Between Q and R, Water is losing energy to surroundings.

11.	Α	黎 Sir 提提你 💮:
		1. By Law of conservation of energy,
		Energy supplied by power supply = Light Energy + Heat Energy
		$\mathbf{Pt} = \mathbf{Light} \ \mathbf{energy} + \mathbf{mc} \Delta T \implies (2)(60 \times 10) = Light \ energy + (0.05)(4200)(4.5)$
		Light energy = 1200 – 945 = 255 J

С

A

12.

13.

14.

B

### 黎 Sir 提提你 😇 :

- **1.** Shinny and White surface  $\Rightarrow$  Good reflector of light by radiation!
- 2. Dull and Black surface  $\Rightarrow$  Good absorber of heat by radiation!
- 3. Case R should be made of insulating material to trap heat inside the case!
- 4. Glass cover prevent the convection current from rising out of the box!

			- Tota
黎	Sir	提提你	

- 1. Speed = Distance / Time or Speed = Frequency x Wavelength
- 2. Speed of water wave =  $0.5 \times 2 = 1 \text{ m/s}$
- 3. Speed of sound wave = 340 m/s
- 4. Speed of Microwave in air = 300,000,000 m/s
- **5.** Therefore, Time taken:  $T_3 > T_2 > T_1$

### 黎 Sir 提提你 💮 :

- Image below the calm water surface ⇒ Cannot be formed on a screen
   ⇒ Virtual image!
- 2. Calm water surface  $\Rightarrow$  Regular reflection  $\Rightarrow$  Clear image!
- 3. For calm water surface (plane mirror), Object size = Image size at all distance! The image on your retina of your eye will be bigger if you walk towards the calm water surface!







# 18. B 察 Sir 提提你 Sir 1. Any current-voltage (I-V) graph $\Rightarrow$ Straight line passing through the origin $\Rightarrow$ V/I = constant for all values of V and I $\Rightarrow$ Obey ohm's law. 2. Any current-voltage (I-V) graph $\Rightarrow$ Straight line passing through the origin $\Rightarrow$ 1/Slope = Resistance = Constant $\Rightarrow \downarrow$ Slope $\Rightarrow \uparrow$ Resistance $\Rightarrow$ Slope of P > Slope of Q $\Rightarrow$ Resistance of P < Resistance of Q</td> 3. Parallel circuit $\Rightarrow$ Same potential difference (p.d.) across P and Q $\Rightarrow$ By V = IR $\Rightarrow \uparrow R \Rightarrow \downarrow I$ ( $\because$ V = constant) $\Rightarrow$ Resistance of P < Resistance of Q $\Rightarrow$ I<sub>P</sub> > I<sub>Q</sub>

19.	D	黎 Sir 提提你          1. (R + R) // (R + R) = 2R // 2R = 2R/2 = R         2. (R + R) // (R + R + R) = 2R // 3R = (3R)(2R)/(3R + 2R) = (6/5)R
		3. $R // (R + R + R + R + R) = R // 5R = R(5R)/(R + 5R) = (5/6)R$
		4. $(R + R + R) // (R + R + R) = 3R // 3R = (3/2)R$
		Fast trick to calculate equivalent resistance of special cases:
		♦ Two resistors in parallel $\Rightarrow$ Product / Sum
		$\diamond$ N equal resistors R in parallel $\Rightarrow$ R/N

20.	Α	黎 Sir 提提你 <sup>@</sup> :
		<b>1.</b> Switch S open $\Rightarrow$ In-series circuit $\Rightarrow$ V = IR $\Rightarrow$ V = 1(6+6) = 12V
		2. Switch S closed $\Rightarrow$ Equivalent resistance = $6\Omega//3\Omega + 6\Omega = 8\Omega$
		3. By $V = IR \implies I = 12/8 = 1.5A$

21.	В	黎 Sir 提提你 😇:
		1. Along RS $\Rightarrow$ Current flowing downwards + External B-field into paper
		$\Rightarrow$ Fleming's left hand rule $\Rightarrow$ Magnetic force acting on it to the right.
		2. Along QR $\Rightarrow$ Current flowing to the right + External B-field into paper
		$\Rightarrow$ Fleming's left hand rule $\Rightarrow$ Magnetic force acting on it upwards.
		3. Current + External B-field = Force acting on the wire
		$\Rightarrow$ Fleming's left hand rule $\Rightarrow$ Direction of Force on RS, PS, PQ and QR =
		Right, Downwards, Left and Upward and Same magnitude
		$\Rightarrow$ Resultant magnetic force acting on the coil is zero.

22.	A	黎 Sir 提提你 <sup>©</sup> :
		1. $\alpha$ , $\beta$ and $\gamma$ radiation can travel through a vacuum, not only $\alpha$ can do.
		2. $\alpha$ radiation can be stopped by a few papers, let alone 5 mm think aluminium plate.
		<b>3.</b> β particles are fast-moving electrons and can be produced by splitting a neutron into proton and electron roughly.
		4. $\gamma$ radiation also have ionization power $\Rightarrow$ Blacken photographic film.

23.	D	黎 Sir 提提你 💮:
		1. Corrected count rate = Uncorrected count rate – Background count rate
		2. Half-life: Time for half numbers of nuclei to decay
		3. Therefore, Corrected count rate = $1050 - 50 = 1000$
		4. 8 hours / 4 hours = 2 half life $\Rightarrow$ Corrected count rate = 1000 / 2
		$\Rightarrow$ 500 / 2 $\Rightarrow$ 250!
		5. Uncorrected count rate after 8 hours = 250 + 50 = 300 counts / minute
		<ol> <li>Han-me: Time for nan numbers of nuclei to decay</li> <li>Therefore, Corrected count rate = 1050 - 50 = 1000</li> <li>8 hours / 4 hours = 2 half life ⇒ Corrected count rate = 1000 / 2 ⇒ 500 / 2 ⇒ 250!</li> <li>Uncorrected count rate after 8 hours = 250 + 50 = 300 counts / minute</li> </ol>

# 黎 Sir 提提你 🕙 :

24.

С

- **1.**  $\alpha$  decay:  ${}^{A}_{Z}X \rightarrow {}^{A-4}_{Z-2}Y + {}^{4}_{2}He \Rightarrow$
- **2.**  $\beta$  decay:  ${}^{A}_{Z}X \rightarrow {}^{A}_{Z+1}Y + {}^{0}_{-1}\beta \Rightarrow$
- 3. Only  $\alpha$  decay decreases mass number by 4.
- 4.  $\alpha$  decay decrease atomic number by 2
- 5.  $\beta$  decay increase atomic number by 1
- 6. Now, Changes in mass number = 238 210 = 28
  - $\Rightarrow$  Numbers of  $\alpha$  -particle = 28/4 = 7
- 7. Now, Changes in atomic number = 82 92 = -10
  - $\Rightarrow$  -10 = -7 x 2 +  $\beta$   $\Rightarrow$  Number of  $\beta$  particles = 4



26.	С	黎 Sir 提提你 <sup>©</sup> :
		1. The fuse should be connected to live wire. When there is a fault, the fuse is melted. The electric potential of the appliance remains at 0V and isolated from the high potential +/- 220 V.
		<ol> <li>For a.c. circuit, the direction of current will changes at a certain frequency, for example, 50 Hz, which means the direction of current will changes 50 times in a second.</li> </ol>
		Remarks:
		1. If the live wire is at + 220 V, the current will flow from the live wire to the neutral wire (always at 0 V).
		2. If the live wire is at – 220 V, the current will flow from the neutral wire (always at 0V) to the live wire (at -220 V this moment).

27.	D	黎 Sir 提提你 <sup>6</sup> :
		<ol> <li>X-ray is Electromagnetic wave (EM wave) and so the speed of X-ray is 3 x 10<sup>8</sup> m/s in vacuum or air, which is irrespective with the speed of electrons striking the heavy metal target.</li> </ol>
		2. X-ray is released when fast moving electrons (accelerated by thermionic emission) strike the heavy metal target.

#### The end of Section A

Sectio	Section B	
28.	Α	黎 Sir 提提你 <sup>€</sup> : 1. Faster initial velocity ⇒ Larger y-intercept on velocity-time graph. 2. Free-fall body ⇒ Acceleration due to gravity = 9.81 m s <sup>-2</sup> = constant





31. B 黎 Sir 提提你 <sup>●</sup>:
1. From P to Q ⇒ Free fall body ⇒ Acceleration = -9.81 m s<sup>-2</sup>
2. From Q to R ⇒ Downwards Deceleration ⇒ Net Force pointing upward! (Net Force = Water Friction – Weight > 0)
3. From P to R ⇒ Loss in G.P.E. = Work done against water friction (Reference zero of G.P.E. = point R and K.E. = 0 J at point R)

32.	С	黎	Sir 提提你 <sup>1</sup> :
		1.	By law of conversation of momentum, total momentum before collision = $0 + 0 = 0 \Rightarrow$ Total momentum after collision = $0!$
		2.	By law of conversation of momentum, Take to the right as positive, $0 + 0 = 2my + my \implies y = 2y$
			Therefore, the kinetic energy of trolley $\mathbf{P} = \frac{1}{2}mv_p^2 = \frac{1}{2}m(-2v)^2 = 2mv^2$
			The kinetic energy of trolley $\mathbf{Q} = \frac{1}{2}(2m)v^2 = mv^2 \implies K.E_{\cdot p} = 2K.E_{\cdot Q}$
		3.	By law of conversation of energy, $\downarrow$ E.P.E. in the spring = $\uparrow$ K.E. of trolleys
			$= 2mv^2 + mv^2$
			$= 3mv^2$



#### 34. B 黎 Sir 提提你

- 1. By wave equation:  $v = f\lambda \implies 2 = f(8) \implies f = 0.25 \text{ Hz} \implies T = 4 \text{ s}$

35.	В	黎 Sir 提提你 💿:
		1. Displacement-Distance graph $\Rightarrow$ Displacement-time graph

6.

- Determine the direction of wave movement / particle moving direction
- Draw the next moment of the wave pattern
- 2. P is going downward  $\Rightarrow 3/4 \lambda \Rightarrow 3/4T \Rightarrow 3/4(4) = 3$  seconds









# 40. D 黎 Sir 提提你 ●: 1. Ammeter reading = Zero ⇔ No current flow! 2. Voltmeter reading = Zero ⇔ No potential difference between two points! 3. If bulb Y burns out ⇒ In-series circuit with bulb X, voltmeter and ammeter ⇒ ↑ Total resistance of the circuit ⇒ Little current flow ⇒ Ammeter reading = Zero! 4. If bulb Y burns out ⇒ In-series circuit with bulb X, voltmeter and ammeter ⇒ ↑ Total resistance of the circuit ⇒ Voltmeter reading = e.m.f. / voltage of the battery!



42. A **黎 Sir 提提你 9**: 1. At the beginning  $\Rightarrow$  Switch S is closed  $\Rightarrow$  Bulb L1 is shorted circuit!  $\Rightarrow$  Only Bulb L2 lit up! 2. After switch S is closed  $\Rightarrow$  Both Bulb L1 and Bulb L2 lit up  $\Rightarrow$  By  $\frac{N_1}{N_2} = \frac{V_1}{V_2} = \text{constant} \Rightarrow$  Voltage across secondary coil no change!  $\Rightarrow$  Voltage shared between Bulb L1 and Bulb L2  $\Rightarrow \downarrow$  Brightness (Power) of Bulb L2 and  $\uparrow$  that of Bulb L1 3. After switch S is closed  $\Rightarrow$  Both Bulb L1 and Bulb L2 lit up  $\Rightarrow$  By  $\frac{N_1}{N_2} = \frac{V_1}{V_2} = \text{constant} \Rightarrow$  Voltage across secondary coil no change!  $\Rightarrow \uparrow$  Resistance in the between the secondary coil  $\Rightarrow \downarrow$  Current in the secondary coil ( $I_2$ ) ( $\because \downarrow I = \frac{V}{R} \uparrow$  and  $V_2$  no change!)  $\Rightarrow$  By  $\frac{N_1}{N_2} = \frac{I_2}{I_1} = \text{constant} \Rightarrow \downarrow$  Current in the primary coil



44.	D	黎 Sir 提提你 <sup>©</sup> :
		1. Rod PQ is moving to the right and cutting the magnetic field lines into paper
		$\Rightarrow \uparrow$ Magnetic flux linkage inside the coil PQRS
		$\Rightarrow$ By Lenz' Law
		$\Rightarrow$ Induced current flows from QPSR anticlockwise and
		by Right hand's grip rule
		$\Rightarrow$ Producing magnetic flux out of paper
		$\Rightarrow$ Opposing the $\uparrow$ Magnetic flux into paper
		$\Rightarrow$ Current flowing through rod QP and it is moving to right
		$\Rightarrow$ By Fleming's Left hand rule
		$\Rightarrow$ Magnetic force acting on the rod QP to the left
		$\Rightarrow$ Since the rod QP is moving with uniform velocity
		$\Rightarrow$ Resultant force acting on the rod = Zero
		$\Rightarrow$ There should be an applied force acting on the rod QP to the right by somebody!
		$\Rightarrow$ Work done by the applied force = Electrical energy of the circuit!
		2. If Rod PQ is moving to the left and cutting the magnetic field lines into paper
		$\Rightarrow$ $\downarrow$ Magnetic flux linkage inside the coil PQRS
		$\Rightarrow$ By Lenz' Law
		$\Rightarrow$ Induced current flows from PQRS clockwise and

- by Right hand's grip rule
- $\Rightarrow$  Producing magnetic flux into paper
- $\Rightarrow$  Opposing the  $\downarrow$  Magnetic flux into paper

45.	A	黎 Sir 提提你 💮:
		1. At the beginning,
		• $\beta$ radiation $\Rightarrow$ Count rate increases significantly at P
		• $\gamma$ radiation $\Rightarrow$ Count rate increases significantly at Q
		2. After applying B-field out of paper
		$\Rightarrow$ By Fleming's left hand rule
		$\Rightarrow$ Magnetic Force acting on $\beta$ particle at ( $\uparrow$ ) direction
		$\Rightarrow \downarrow$ Count rate at P but it will not affect count rate at Q!
		3. After applying B-field out of paper
		$\Rightarrow$ No effect on $\gamma$ radiation due to that face that $\gamma$ has no charge!
		$\Rightarrow$ Count rate at Q due to $\gamma$ radiation does not change
		4. Combing all effects, after applying B-field out of paper
		$\Rightarrow \downarrow$ Count rate at P and count rate at Q remains unchanged!

The end of Section B.

MC 係分 ABC Grade 既地方,
越出越煩,越出越難!
轉數快,概念清!缺一不可!
同學一定要快又要好小心!
Andy's predicted M.C. Grade boundaries:
A: 41/45 B: 36/45 C: 31/45
D: 25/45 C: 20/45



# 黎 sir 簡介 Andy Lai BEng CUHK, MIEEE



◆ 畢業於香港中文大學電子工程學系,黎 sir 教室創辦人之一.

- ◆ 超過 15 年教授中學文憑 / IB Diploma / GCE / HSC / SAT / AP / GCSE / IGCSE / IB MYP 課程經驗.
- ◇ 與學生面對新制度的中學文憑試,黎 sir 親身上陣,以實力於物理科和經濟科奪取 5\*\*,證明寶刀未老.
- ◆ 熟悉出題趨勢,教授考試取分技巧;鼓勵同學獨立思考,增強同學理解能力.
- ◆ 善用生活化例子講解,教法生動,增加學習趣味;深入淺出,明白學生學習上的困難和需要.
- ♦ 精心編制筆記,適合中文和英文中學學生就讀; 精心編制練習和試題,協助同學盡快掌握答題技巧.
- ◆ 黎 sir 在中學和大學時代已是一名傑出學生, 曾獲取的多項學業上和運動上的獎學金及獎項.
- ♦ 曾代表香港參加國際性運動比賽,取得優異成績,又讀得又玩得,絕不是死讀書的書呆子.
- ◆ 任教科目:所有數學科,物理科,化學科,生物科,經濟科,商業科.

黎 sir 教室學生佳績: Grallent Results ◇ 首屆香港中學文憑 (HKDSE)、多位學生取得 5/5\*/5\*\*級以上佳績. 更有學生考獲 5 科 5\*\*级2科5\*级1科5级優異成績,在全港72620考生中,排名28,入讀港大醫學院. ◇ 英國高考 (GCE AS/AL), 多位學生取得 A\*/A 最高級別, 更有學生考獲 5 科 A\*. ◇ 國際文憑 (IB Diploma), 多位學生取得 6 / 7 級別, 更有學生取得總分 40 分以上. ◆ 英國會考 (IGCSE / GCSE), 多位學生取得 A / A\*成績, 更有學生取得 8 科 A\*。 ◇ 加拿大大學預科 (CESI) 數學課程 MCV4U, 取得 98/100, 99/100 成績。 ◆ 學生成功拔尖 (EAS),提早入讀港大理學院和中大法律學院. ♦ 香港中學會考 (HKCEE), 多位學生取得 20 分以上佳績. ◇ 保加利亞國際數學競賽 (BIMC 2013) 隊際賽金牌. ◆ 奧數華夏杯/港澳杯/華杯,多位學生取得特等獎/金獎/一等獎/全港第二名。 ◆ 還有更多,怒不能盡錄,詳情請瀏覽以下網址: <u>www.andylai.hk/result.htm</u>

# 黎 sir 教室課程特色:

- ◇ 小組教學 (1-6人), 導師親身教學; 照顧每位學生需要, 事半功倍.
- ◆ 精心編制筆記,練習以近 30 年本地和外國公開試題為藍本.
- ◆ 概念理解,取分技巧並重;協助同學盡快掌握答題技巧.
- ◆ 歡迎自由組合小組上課,時間及課程內容編排更有彈性.
- ◆ 詳情請瀏覽以下網址: <u>www.andylai.hk</u>









# 黎 sir 教室 A Lai Learning Center

HKDSE / IB Diploma / GCE AS AL / AP / SAT / HSC

IGCSE / GCSE / IB MYP / KS3 / MO / F.1 – F.6 / Y9 – Y13

資深中學補習導師 小組補習 事半功倍!!!

黎 sir 簡介 Andy Lai BEAR CUHK, MIEEE



- ◆ 畢業於香港中文大學, 黎 sir 教室創辦人之一.
- ◆ 超過 15 年教授 中學文憑 / IB Diploma / GCE / HSC / SAT / AP / GCSE / IGCSE / IB MYP 課程經驗.
- ◆ 與學生面對新制度的中學文憑試,黎 sir 親身上陣,以實力於物理科和經濟科奪取 5\*\*,證明寶刀未老.
- ◇ 現於黎 sir 教室任教補習班,學生就讀於英文中學,中文中學,國際學校及英國留學生.
- ◆ 熟悉近年出題趨勢,教授考試取分技巧;鼓勵同學獨立思考,增強同學理解能力
- ◆ 善用生活化例子講解,教法生動,增加學習趣味;深入淺出,明白學生學習上的困難和需要.
- ◆ 中英對照筆記,適合中文和英文中學學生就讀; 精心編制練習和試題,協助同學盡快掌握答題技巧.
- ◆ 黎 sir 在中學和大學時代已是一名傑出學生, 曾獲取多項學業上和運動上的獎學金及獎項; 曾代表香港參加國際性運動比賽, 取得優異成績, 「又讀得又玩得」, 絕不是死讀書的書呆子.
- ◆ 黎 sir 在就讀大學時曾於全球最大美資電腦公司任實習生超過一年,大學畢業後旋即於全港大型英 資電腦公司,負責主理該公司所代理的全球大型美資電腦公司儲存系統銷售業務.
- ◇ 於短短半年內將該產品線銷售業績提升超過 50%. 同時更被公司評選為"傑出表現員工 Outstanding Performer",成功將書本上的知識靈活運用於工作上.
- ◆ 黎 sir 為了教學理想, 毅然辭去工作, 全身投入教學事業, 希望將自己的一套學習方法教授學生

## 黎 sir 教室 課程特色

- ◆ 小組教學 (1-6人), 導師親身教學; 照顧每位學生需要, 事半功倍.
- ♦ 精心編制筆記,練習以近 30 年本地和外國公開試題為藍本.
- ◆ 概念理解,取分技巧並重;協助同學盡快掌握答題技巧.
- ♦ 歡迎自由組合小組上課,時間及課程內容編排更有彈性.
- ♦ 時間及課程請瀏覽以下網址: <u>www.andylai.hk</u>



旺角 E2 出口,油麻地 A2 出口

1, 1A, 2, 3C, 6, 6C, 6F, 9, 30X, 35A, 41A, 42A, 60X, 63X, 68X, 69X, 81S, 87D, 93K, 95, 104, 117, 203, 212, 230X, 234P, 234X, 238P, 238S, 259B, 270P, 281A

21K, 74, 74S



上課地址:	香港九龍旺角煙廠街9號興發商業大廈 706 室.
查詢熱線:	6772 3001
電郵地址:	enquiry@andylai.hk
網址:	www.andylai.hk