

**Answer any 4 questions out of the 5 below**

Q1.

We have discussed many building projects during lectures. Most of them are actually doing somethings against the nature, such as consuming or even wasting huge amount of energy or resources during the construction or operation.

- a) Give two examples of things that are against the nature during construction or operation of a building? (10 marks)
- b) What can we do to lessen the extent of the damage to our environment for the items you indicated above. Give one suggestion for each item you list down. (15 marks)

Q2.

A lot of professional guidelines and assessment schemes are available for intelligent buildings or green buildings.

- a) What are these assessment schemes for and their ultimate aims? (15 marks)
- b) Who are the various stakeholders involved and what are their different interests? (10 marks)

Q3.

Various renewable energy technologies have been promoted in many green building projects.

- a) Why are we so interested in promoting these technologies? (10 marks)
- b) Give three issues that hinder the development of these technologies? (15 marks)

Q4.

According to the electricity tariff from CLP Power (HK Ltd.), the residential tariff will be the aggregate of the following items:

**(1) Energy Charge**

Total Bimonthly <sup>a</sup> Consumption Block	Rate (Cents <sup>b</sup> / Unit <sup>c</sup> )
Each of the first 400 units	85.5
Each of the next 600 units	98.9
Each of the next 800 units	114.7
Each of the next 800 units	145.5
Each of the next 800 units	168.4
Each of the next 800 units	178.8
Each unit over 4200	180.0

**(2) Fuel Cost Adjustment**

A fuel clause adjustment of **21.0 cents per unit** will be made when the composite fuel price is above or below \$700 per 44 gigajoules.

(3) Energy Saving Rebate

The rebate (calculated as the following rate) is only applicable to a bill with total **bimonthly** consumption of **400 Units or less**.

Total Bimonthly Consumption Range	Rebate Rate (Cents/Unit)
1 – 200 units	17.2 cents per unit on total consumption
201 – 300 units	17.2 cents per unit on total consumption
301 – 400 units	17.2 cents per unit on total consumption

**Note:** In all rate tables,

<sup>a</sup> “Bimonthly” means the period of approximately two months between a meter-reading (including estimations) and the next one. Assume there are 60 days between bimonthly meter-reading in this case

<sup>b</sup> 100 cents = 1 HKD

<sup>c</sup> “Unit” means one kilowatt-hour (kWh=10<sup>3</sup> Watt-hour) of electricity. Kilowatt-hour is the amount of energy consumed in one hour

A tenant lives in a flat under the electricity tariff scheme from CLP as above. He recorded his usage in