



Faculty of Electrical & Electronics Engineering

### QUIZ 3

Hamidi plans to install an off-grid PV system for his garage based on  $170W_p$  NE-170U1 modules. The average daily PSH is 4 hours. The daily load demand of his garage is given as Table 1 below.

Table 1: Electrical appliances

Appliance	Voltage (V)	Power (W)	Unit	Daily Use (hour)
LCD TV	240	80	1	3
Fan	240	70	3	5
Refrigerator	240	150	1	10
Laptop	240	65	1	4
Lamps	240	15	4	6

- (a) Calculate the total load demand of his garage. Determine the recommended system voltage of the system (12V, 24V or 48V). Show all the calculations. **[7 marks]**
- (b) Calculate the average daily energy generated by 2 PV modules. **[3 marks]**