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DEPT: CHEMICAL ENGINEERING
MATRIC NO: 15/ENG02/021

	Days	Average Ambient Day time	Temperature Night time
1.	17/02/20	35°C	25°C
2.	18/02/20	36°C	25°C
3.	19/02/20	35°C	25°C
4.	20/02/20	36°C	25°C
5.	21/02/20	37°C	25°C

Thermal energy $Q = m \Delta T$

- i. $\Delta T_1 = 35 - 25 = 10^\circ\text{C}$
- $\Delta T_2 = 36 - 25 = 11^\circ\text{C}$
- $\Delta T_3 = 35 - 25 = 10^\circ\text{C}$
- $\Delta T_4 = 36 - 25 = 11^\circ\text{C}$
- $\Delta T_5 = 37 - 25 = 12^\circ\text{C}$

ii. Area of Abund = $1.3 \times 10^6 \text{ m}^2$
using the formula $\rho A = m/A$
 $\therefore m = \rho A \times A$
 $= 1.67 \times 1.3 \times 10^6$
 $= 2.171 \times 10^6 \text{ Kg}$

$$Q_1 = mc\Delta T_1$$

$$= 2.171 \times 10^6 \times 1020 \times 10 = 22,144,200,000 \text{ J}$$

$$Q_2 = Mc\Delta T_2$$

$$= 2.171 \times 10^6 \times 1020 \times 11 = 24,358,620,000 \text{ J}$$

$$Q_3 = Mc\Delta T_3$$

$$= 2.171 \times 10^6 \times 1020 \times 10 = 22,144,200,000 \text{ J}$$

$$Q_4 = Mc\Delta T_4$$

$$= 2.171 \times 10^6 \times 1020 \times 11 = 24,358,620,000 \text{ J}$$

$$Q_5 = Mc\Delta T_5$$

$$= 2.171 \times 10^6 \times 1020 \times 12 = 26,373,040,000 \text{ J}$$

$$\frac{Q_1 + Q_2 + Q_3 + Q_4 + Q_5}{5}$$

$$= \frac{119,578,680,000}{5}$$

$$= 23,915,736,000 \text{ J, ans}$$