

NAME FATAH - OSO ALODEJI
DEPT: PETROLEUM ENG
MTRIC NO: 15/EN0507/021

	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 $Q = mCAT$

$$i. \quad \Delta T_1 = 35 - 25 = 10^\circ\text{C}$$

$$\Delta T_2 = 36 - 25 = 11^\circ\text{C}$$

$$\Delta T_3 = 35 - 25 = 10^\circ\text{C}$$

$$\Delta T_4 = 36 - 25 = 11^\circ\text{C}$$

$$\Delta T_5 = 37 - 25 = 12^\circ\text{C}$$

$$ii. \quad \text{Area of Abund} = 1.3 \times 10^6 \text{ m}^2$$

using the formula $\rho A = m/A$

$$\therefore m = \rho A \times A$$

$$= 1.67 \times 1.3 \times 10^6$$

$$= 2.171 \times 10^6 \text{ Kg}$$

$$- Q_1 = mc\Delta T_1 \\ = 2.171 \times 10^6 \times 1020 \times 10 = 22,144,200,000 \text{ J}$$

$$- Q_2 = mc\Delta T_2 \\ = 2.171 \times 10^6 \times 1020 \times 11 = 24,358,620,000 \text{ J}$$

$$- Q_3 = mc\Delta T_3 \\ = 2.171 \times 10^6 \times 1020 \times 10 = 22,144,200,000 \text{ J}$$

$$- Q_4 = mc\Delta T_4 \\ = 2.171 \times 10^6 \times 1020 \times 11 = 24,358,620,000 \text{ J}$$

$$- Q_5 = mc\Delta T_5 \\ = 2.171 \times 10^6 \times 1020 \times 12 = 26,373,040,000 \text{ J}$$

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

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

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