

NEET THERMODYNAMICS (PHYSICS) — REFRIGERATORS AND HEAT PUMPS — PYQS

Max. Marks: 20
Questions: 5

Section A (MCQ) — 5 questions

- Q.1** A Carnot engine having an efficiency of $\frac{1}{10}$ as heat engine, is used as a refrigerator. If the work done on the system is 10 J, the amount of energy absorbed from the reservoir at lower temperature is

[NEET 2017]

- (1) 90 J (2) 99 J (3) 100 J (4) 1 J

Scan or tap for the full solution



- Q.2** A refrigerator works between 4°C and 30°C . It is required to remove 600 calories of heat every second in order to keep the temperature of the refrigerated space constant. The power required is (Take $1 \text{ cal} = 4.2 \text{ Joules}$)

[NEET 2016 (Phase 1)]

- (1) 236.5 W (2) 2365 W (3) 2.365 W (4) 23.65 W

Scan or tap for the full solution



- Q.3** The temperature inside a refrigerator is $t_2^\circ\text{C}$ and the room temperature is $t_1^\circ\text{C}$. The amount of heat delivered to the room for each joule of electrical energy consumed ideally will be

[NEET 2016 (Phase 2)]

- (1) $\frac{t_1}{t_1 - t_2}$ (2) $\frac{t_1 + 273}{t_1 - t_2}$
 (3) $\frac{t_2 + 273}{t_1 - t_2}$ (4) $\frac{t_1 + t_2}{t_1 + 273}$

Scan or tap for the full solution



- Q.4** The coefficient of performance of a refrigerator is 5. If the temperature inside freezer is -20°C , the temperature of the surroundings to which it rejects heat is

[AIPMT 2015]

- (1) 11°C (2) 21°C (3) 31°C (4) 41°C

Scan or tap for the full solution



- Q.5** A Carnot engine, having an efficiency of $\eta = \frac{1}{10}$ as heat engine, is used as a refrigerator. If the work done on the system is 10 J, the amount of energy absorbed from the reservoir at lower temperature is

[AIPMT 2015 (Cancelled)]

- (1) 90 J (2) 1 J (3) 100 J (4) 99 J

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2	3	4	5						
Ans.	1	1	2	3	1						