

Name: _____	1st YEAR Test Session 2021-22	Physics	Time Allowed: 45 M
Roll# _____	Section: _____	Syllabus: Ch#11	Total Marks: 30 Obt Marks:

Think Positive , Live Happy

Change Thoughts , Change Society

Q#	A	B	C	D	Q#	A	B	C	D	Q#	A	B	C	D	Q#	A	B	C	D	Q#	A	B	C	D																									
01.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	02.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	03.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	04.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	05.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	06.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	07.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	08.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	09.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	10.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q. No. 1 You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, Fill bubble sheet that option. Cutting, Over-writing, using lead pencil and filling more than one circle will result in zero marks in that question. (10x1=10)

Sr.#	Questions	A	B	C	D
1	In Boyle's law P and V ⁻¹ having re	Direct	Inverse	Both	None
2	In the real gases internal energy of molecules having the function of	K.E	P.E	Gravitational energy	A and b
3	Work done by the system taken as	+ve	-ve	Both	Zero
4	In adiabatic process ----- remains constant.	Heat	Temperature	Pressure	Volume
5	Efficiency of ideal engine is	Unity	Greater then unity	Less than unity	B and C
6	Entropy having relation with tempe is	Direct	Inverse	Both	None
7	In the ideal gases internal energy of molecules having the function of	K.E &	P.E	Gravitational energy	A and b
8	Petrol engines convertpercent of heat energy into work	25	35	45	50
9	The system whose efficiency is 100% is called.....	ideal	mechanical	technical	electrical
10	The whose efficiency is much greater than others is called	Carnot engine	Heat engine	Petrol engine	Diesel engine

Q#:2 Answer the Following short Questions (6x2=12)

i. State the 1 st law of thermodynamics.	ii. Can the mechanical energy be converted into heat energy? If so give example?
iii. What is difference b/w reversible and irreversible process?	iv. What is the average translational K.E of molecules in a gas at temperature 27° C?
v. Why does the pressure of a gas in a car tyre increase when it is driven through some distance?	vi. Write the relation b/w temperature and average K.E?

Q#:3 Answer the Following short Questions (5+3=8)

- (a) Prove that $C_p - C_v = R$
- (b) A heat engine performs 100J of work and at the same time rejects 400J of heat energy to the cold reservoirs. What is the efficiency of the engine?