	FOR GOD AND COUNTER	St. Lawrence A Jesuit Christia <u>Term : 2</u>	e High School n Minority Institution	TES			
	Class – XI	Solution of Wor Subject – P	rk Sheet – 33 hysics	Date -23 .11.20			
	Chapter – Bulk Properties	of Matter	5	Topic – Thermal expansion			
Choo	se the correct option for the fo	llowing questions.		1 × 15 = 15			
1.	. The volume of a liquid is 8 a. 2.5 × 10 ⁻⁴ /°C	30m ³ at 15 ⁰ C and 855 b. 3× 10 ^{−3} /°C	m ³ at 90 [°] C. γ of it is c. 4× 10 ⁻⁴ /°C	d. 5× 10 ⁻⁴ /°C			
2.	 A glass is fully filled with v a. Cooled but not when he c. Both cooled or heated 	vater at 4°C. Water ov eated	erflows when the glass is b. heated but not when cooled d. none of these				
3.	The coefficient of volume a . $0^{0}C$	expansion of water is z b. 100°C	zero at c. -40° C	d. 4 [°] C			
4.	 The internal volume of gla vessel so that it remains con a. 0.1 Vm³ 	ass vessel is v m ³ . W nstant at all temperatu b. 0.15 V m ³	hat is the volume of mercury re? γ_r of $Hg = 0.00018/°C$, α c. $0.2 Vm^3$	that should be placed inside the α of glass is 0.000009/°C d. 0.3 Vm^3			
5.	 On heating a liquid of cult container will a. Remain the same b. rise c. fall first and then rise to d. fall 	bical expansivity α in the constraints and the constraints of the c	a container of linear expans	ivity $\frac{\alpha}{3}$, the level of liquid in the			
6	At 5°C, 0.97 of the volume in water ($\gamma_w = 3.3 \times 10^{-4}$ a. 98.7 °C b.	of a body is submerg $7/K$) is (neglect the e 88.7 ^{0}C	ged in water. The temp at whic xpansion of the body) c. 78.7 ⁰ C	h the entire body gets submerged d. 95 ⁰ C			
7.	. Liquid with coefficient of	Liquid with coefficient of volume expansion γ is filled in a container of coefficient of linear expansion α . If the					
	liquid overflows on heating a. $\gamma = 3\alpha$	then $b. \gamma > 3\alpha$	c. γ < 3α	d. $\gamma > 3\alpha^3$			
8	. At constant pressure $V_1 a$ respectively. The ratio $\frac{V_1}{V_2}$ is	$nd V_2$ are the volum	es of a given mass of a gas	s at temperature 27^{0} C and 54^{0} C			
	a. 54/27	b. 27/54	C. 100/109	d. 109/100			
9.	 A given amount of gas at 2 approximately a. 113⁰C 	0°C has a pressure P. 1 b. 40°C	the temp at which the pressure c. 213°C	will be 2P (at constant volume) is d. 313 ⁰ C			

10.	. When temperature of a gas contained in a closed vessel is increased by 1^{0} C, its pressure increases by 0.4%. initial temp of the gas is							
	a. 25 [°] C	<mark>b. 250K</mark>	c.250 ⁰ C	d. 25K				
11.	11. A gas at temp 250K is contained in a closed vessel. If its temperature is increased by 1K, then its pressure will be increased by							
	a. 0.1%	b. 0.2%	c. 0.3%	d. 0.4%				
12.	2. A gas at certain volume and temperature has pressure equal to 0.75m of Hg. If the mass of the gas is doubled at the same volume and temperature, its new pressure will be							
	a. 0.75cm	b. 2m	<mark>c. 1.5m</mark>	d. 0.375m				
13. If an ideal gas has volume v at 27° C and it is heated at a constant pressure so that its volume becomes 1.5v, then the final temp is								
a.	327К	b. 873K	<mark>c. 177⁰C</mark>	d. 600 ⁰ C				
 A vessel contains 1mole of oxygen gas at temp T. The pressure of the gas is P. An identical vessel containing 1mole He at temp 2T has pressure of 								
a.	P/8	b. P	c. 8P	d. <mark>2P</mark>				
15. A cylinder contains 10kg of a gas at pressure 10^7 N/m ² . The quantity taken out of the cylinder if the final pressure is 2.5x10 ⁶ N/m ² (temp of the gas is constant) is								
a.	7.5kg	b. zero	. 9.5kg	d. 14.2kg				

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