



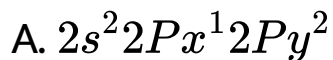
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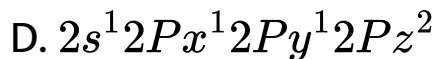
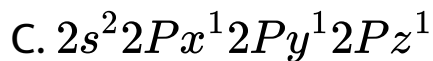
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MODEL QUESTION PAPER 13

Exercise

1. Aufbau principle violated in—





Answer:



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2. dsp^2 hybridisation has geometry

A. Trigonal

B. planar square

C. Tetrahedral

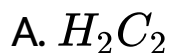
D. Octahedral

Answer:



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3. Which one is not linear



Answer:



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4. Pressure of 44.8 litre of 2 moles of an ideal gas at 546 K is:

A. 3 atm

B. 1 atm

C. 4 atm

D. 2 atm

Answer:



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5. Which one is the correct unit of entropy?

A. $JK^{-1}mol^{-1}$

B. $Jmol^{-1}$

C. $J^{-1}k^{-1}mol^{-1}$

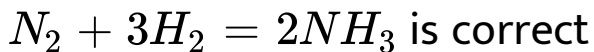
D. $J - kmol^{-1}$

Answer:



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6. Which relation for ΔH for the reaction



A. $\Delta H = \Delta U - 2RT$

B. $\Delta H = \Delta U + RT$

C. $\Delta H = \Delta U + RT$

D. $\Delta H = \Delta U + 2RT$

Answer:



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7. $aA + bB = \text{Product}$ for the above reaction :

$$\frac{dA}{dT} : \frac{dB}{dT}$$

A. 1 : 1

B. $\frac{b}{d}$

C. $\frac{a}{b}$

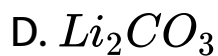
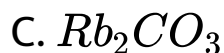
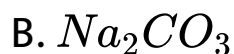
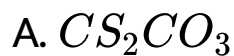
D. $\frac{b}{a}$

Answer:



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8. Which carbonates has the highest thermal stability

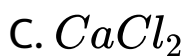
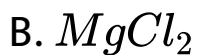


Answer:



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9. Which one has least Covalent Character-



Answer:



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10. Which one is used to identify nitrogen in Lassign test -

A. $AgNO_3$ soln

B. $FeSO_4$ soln

C. Sodium Nitroprunide soln

D. $BaCl_2$ Soln

Answer:



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11. Which one shows geometric isomerism

- A. Acetone - oxime
- B. Benzophenone oxime
- C. Isobutene
- D. acetophenone oxime

Answer:



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12. Which one is produced when quaternary ethyl ammonium hydroxide is strongly heated

A. Ethane

B. Ethene

C. Ethyne

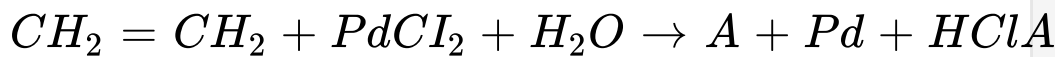
D. Ethanol

Answer:

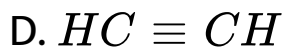
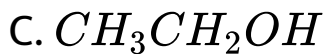
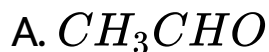


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13.



is



Answer:



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14. Hypothermia is a disease for

A. Cow

B. Man

C. Bird

D. Fish

Answer:



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15. Which law of Chemical Combination does not obey Dalton's atomic theory?



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16. Find the mass of Nitrogen atom equal to the number of Carbon atoms in CO_2



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17. State modern periodic law.



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18. State two non periodic properties of element.



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19. Prove that $pV^\gamma = \text{constant}$ in adiabatic process

.



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20. What is the use of Kjeldahl process?



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21. State equivalent ration law with example.



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22. Establish the relation between normal & Vapour density of real gass.



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23. Find the magnetic and azimuthal quantum number possible in $N = 3$.



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24. Show that 3d subshell can accommodate at most 10 electrons.



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25. Explain why Cl_4 is not hydrolysed while SiCl_4 is hydrolysed



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26. Why $\text{Pb}(\text{CH}_3\text{COO})_2$ do not causes black Precipitation when mixed with charcoal and H_2S .



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27. Which one is more basic and why? $C_2H_5NH_2$

&



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28. What is biomagnification?



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29. Calculate the 2nd ionisation enthalpy of

$\text{Li}^{(2+)}$ given for hydrogen $E_n = -\frac{13.6}{n^2}$ e.v.



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30. If the value of Rydberg constant of hydrogen

is 109737 cm^{-1} determine the longest and

shortest wavelengths of the Balmer series.



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31. Define Covalent and vanderwal radium.

Comment which is higher?



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32. When F does not give precipitation with

$AgNO_3$ soln? Which one has higher-lattice energy

KF & KI.



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33. Dipole moment and bond length of a molecule A - B type are 7.42 D and 2.04 Å respectively. Calculate % Ionic Character. What is H-bonding?

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34. Find the ratio of molecular weight of two gases when rate of diffusion is 16 times more for the 2nd one. State Graham's law of diffusion.

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35. Calculate the entropy change for 100 gm water at $100^{\circ}C$ [latent heat vaporisation is 40.4 KJmol^{-1}] what type of change is observed for entropy for end other reaction.



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36. State two characteristics of spontaneous process. State 2nd law of Thermodynamics.



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37. Balance the following reaction by ion-electron

by ion-electron method-



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38. Balance the following reaction by ion-electron

by ion-electron method $H_2S + SO_2 \rightarrow S + H_2O$



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39. Why HNO_3 Can't be use for the preparation of H_2O_2 by BaO_2 ? What is Marshall acid?

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40. State Similents of Li & Mg in chemical property. What is magnetic moment.

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41. Which one is more acidic $(CH_3)_3C - COOH$ & $O_2N - CH_2 - COOH$ Give an example of +I

effect.



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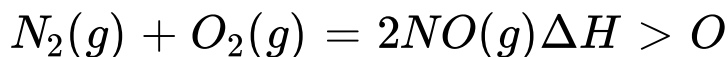
42. Why CH_3COOH shows acidic nature? Give IUPAC name of CH_3CH_2CN .



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43. K_p for the reaction $PCl_5 \rightleftharpoons PCl_3 + Cl_2$ is 1.6 atm. Calculate the equilibrium pressure for 50% dissociation. Discuss the effect of temperature

and promise for the reaction.



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44. Calculate the PH of 1 (M) Monobasic acid soln. in which degree of dissociation is 1.42% State with example the activities of alkaline buffer solution



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45. What happens when mixture of CO_2 and NH_3 gas is passed through a slurry of powdered gypsum in water?



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46. What happens when Borax is strongly heated.
What is Oil dag?

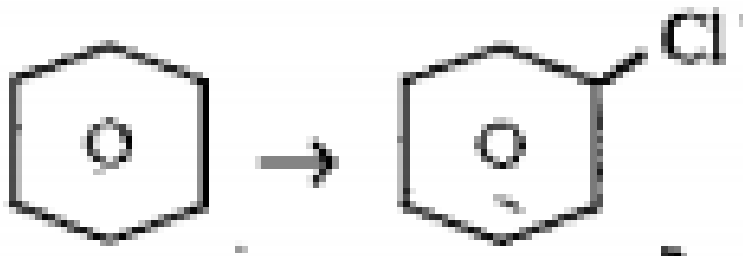


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47. What happens Mixture of sand and Na_2CO_3 is strongly heated. What is Oil dag?

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48. How would you Convert



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49. What is the percentage of Benzene in 90s benzol.



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50. Name one heterocyclic aromatic compound.



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