

## **CHEMISTRY**

## **BOOKS - VGS PUBLICATION-BRILLIANT**

## AP MARCH - 2019 I.P.E.PAPER

Section A

1. What is Plaster of Paris? Write its uses.



**2.** What agrochemicals are responsible for water pollution ?



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**3.** Name the common components of photochemical smog.



**4.** Potassium carbonate cannot be prepared by Solvey process. Why?



**5.** What is the effect of pressure on gaseous chemical equilibrium?



**6.** Explain extensive and intensive properties.



**7.** State the  $3^{rd}$  law of thermodynamics.



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**8.** Calculate the amount of Carbon dioxide that could be produced when one mole of Carbon is burnt in 16g of dioxygen.



**9.** Calculate the ratio of kinetic energies of 3g of hydrogen and 4g of oxygen at an given temperature.



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**10.** Write IUPAC names of the following compounds:

$$(CH_3)_2C(C_2H_5)_2$$



11. Write IUPAC names of the following compounds.

$$CH_3C = C(CH_3)_2$$



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## **Section B**

1. State Graham's law of diffusion.



**2.** Balance the following redox reaction in basic medium by ion-electron method :

$$MnO_{4\,(\,aq\,)}^{\,-}\,+1_{(\,aq\,)}^{\,-}\, o MnO_{2\,(\,s\,)}\,+1_{2\,(\,s\,)}$$



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**3.** What is a conjugate acid-base pair? Write the conjugate acid and conjugate base of each of the following:

a)  $OH^{\,-}$ 

b)  $HCO_3^-$ 



**4.** Explain the following with suitable examples

:

Electron deficient hydrides



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**5.** Explain the following with suitable examples

:

Ionic hydrides



6. Explain the structure of diborane.



7. What do you understand by

(a) Allotropy (b) Inert pair effect?



**8.** Describe two methods of preparaton of ethane. Given any three reaction of ethane.



**9.** Write the reactions of Ethylene with the following:

(a) Ozone b) Cold, dilute alk,

 $KMnO_4$ 



Section C

**1.** What are the postulates of Bohr's model of hydrogen atom?



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2. State Hund's rule and Aufbau principle.



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**3.** Given the outer electronic configuration of s,p,d and f-block elements.



**4.** Explain the hybridisation involved is  $SF_6$ .



**5.** State Fajan's rules, and give suitable examples.

