



CHEMISTRY

BOOKS - ACCURATE PUBLICATION

BOARD PAPER MARCH - 2020

Section A

1. Fill in the blanks- Examples of two flowers with separated sepals are _____ and _____.



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2. Read the given passage and answer the questions

A substance which alters the rate of chemical reaction without undergoing any change in mass and chemical composition at the end of reaction is called catalyst. It may be noted that catalyst which increases the speed of a reaction is called positive catalyst and catalyst which decrease the speed of reaction is called negative catalyst. The promoters are substances that enhance the activity of

catalyst and poisons are the substances which decrease the activity of catalyts.

How many types of catalysts are there ?



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3. Read the given passage and answer the questions

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What are a positive catalysts ?



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4. A catalyst :





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5. Read the given passage and answer the questions

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What are promoters ?



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6. Write the formula of primary amine.



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7. Write name and the structure of the monomer of polythene.



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8. Name two food preservatives.



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9. Which group from periodic table is known as Noble gases ?



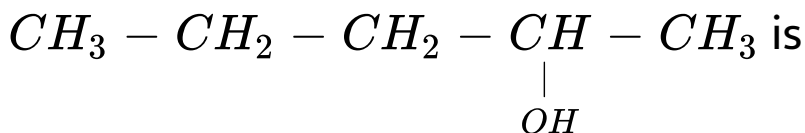
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10. The solution used to preserve biological specimens.



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11. The IUPAC name of compound



A. Pentan-2-ol

B. Pentan-4-ol

C. Pentan-1-ol

D. pentanal

Answer: A



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12. Which is most basic? Benzylamine, aniline, Acetanilide, p-Nitroaniline.

A. Ammonia

B. Primary Amine

C. secondary Amine

D. Tertiary Amine

Answer: C



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13. Antipyretics are medicinal compounds which

A. Reduce Fever

B. Reduce Stress

C. Control Malaria

D. None of these.

Answer: A



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14. The molarity of pure water (density of water = 1gml^{-1})

A. 55.5M

B. 50M

C. 60 M

D. 5M

Answer: A



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15. The units of rate constant for first order equation.

A. s^{-1}

B. $\text{molL}^{-1}\text{s}^{-1}$

C. L^{-1}

D. $L^{-1}\text{s}^{-1}$

Answer: A



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16. Formic acid gives Silver mirror test Tollen's reagent.



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17. Read the given passage and answers following questions :

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catalyst.

Amines act as Lewis bases.



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18. Read the given passage and answers following questions :

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The synthesis of proteins is governed by RNA.

what is catalyst?



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19. In general, alkyl halides are more reactive than aryl halides.



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20. Phenols turn blue litmus red



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Section B

1. Define calcination and roasting.



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2. What are inter halogen compound ? Give preparation of ClF .



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3. Transition metals form mostly coloured compounds. Explain.



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4. Write two difference between double salt and complex compound.



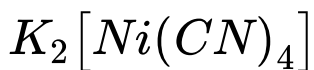
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5. Give IUPAC name of following $K_2[HgCl_4]$



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6. Give IUPAC name of following



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7. Write two differences between hormones and vitamins.



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8. The rate constant for a first order reaction is $80s^{-1}$. How much time will it take to reduce the concentration of the reactants to $\frac{1}{18^{th}}$ of its initial value ?



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9. First order reaction is found to have rate constant, $k = 5.5 \times 10^{-14}s^{-1}$. Find the half life to the reaction.



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10. Calculate two third life of first order reaction having $K = 5.48 \times 10^{-14} \text{ s}^{-1}$.



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Section C

1. Boiling point of benzene is 353.23 K . When 1 . 80 g of non-volatile solute was dissolved in 90 g of benzene the boiling point is raised to

354. 11 K? Calculate molar mass of solute .

(K_b for benzene is $2.53 \text{ K kg mol}^{-1}$)



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2. Difference between osmosis and diffusion.



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3. Explain Victor Meyer's test for primary (1°) alcohol.



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4. The Boiling Point of ethers are lower than isomeric alcohols why ?



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5. Write Hell Volhard Zelinsky reaction.



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6. Write Rosenmund reaction.



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7. Explain Clemmensen's reduction.



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8. Write Aldol condensation reaction.



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9. What are biodegradable polymers ? Give example.



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10. Calculate the molar conductance at infinite dilution ($\lambda^{\circ}m$) of $CaCl_2$, given that molar ionic conductance for

$\lambda^{\circ}m(Ca^{2+})$ 119.5 and Cl^{-} (76.3) Scm^2mol^{-1}



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11. What are primary and secondary batteries ?



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Section D

1. ICl_7 does not exist while IF_7 exist. Why ?



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2. Give Neil Bartlett's experiment on reactivity of Xenon.



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3. SO_3 has zero dipole moment. Why ?



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4. Why noble gases have zero electron affinity values ?



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5. What is formula of oleum ?



Answer:



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6. Describe the preparation of potassium dichromate from iron chromite ore. What is the effect of increasing pH on a solution of potassium dichromate?



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7. Why transition metals show catalytic properties?



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8. Give preparation of XeF_6 and $XeOF_2$.



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9. Explain why transition elements have high melting and boiling points ?



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10. What are the main consequences of lanthanoid contraction ?





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11. Write the following reactions

Sandmeyer reaction



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12. Write the following reactions :

Friedel Craft alkylation.



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13. Give the following reactions:

Fitting reaction



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14. Difference between S_N1 and S_N2 reaction

?



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15. Define specific rotation ?



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16. Define: Racemic Mixture.



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17. Define Optical activity.



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18. Give two uses of chloroform.



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