CHEMISTRY

AAKASH INSTITUTE ENGLISH

MOCK TEST 35

Exercise

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1. Among the following halide ions (X^-)

reaction, which is feasible is?

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2. The number of all possible products excluding stereoisomers obtained on monochlorination of n-butane and iso-butane are respectively
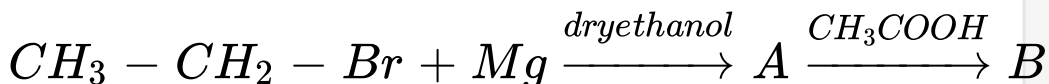
A. 2 and 3

B. 3 and 2

C. 2 and 1

D. 2 and 2

Answer: D

3. The list product (B) formed in the following

reaction   is

$$CH_3 - CH_2 - Br + Mg \xrightarrow{dryethanol} A \xrightarrow{CH_3COOH} B$$

4. In dénydrohalogenation of tert-pentyl

bromide using alc. KOH, major product

obtained is

A. 2-Methylbut-1-ene

B. 2-Methylbut-2-ene

C. Pen! 1-ene
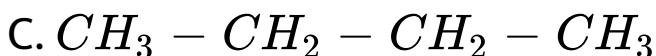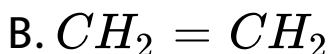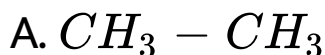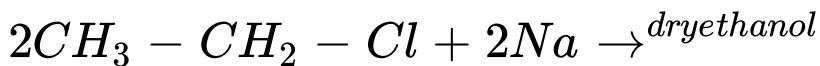
D. Pent-2 ene

Answer: B

5. Which of the following is one of the major products formed in the reaction?

$$2CH_3 - CH_2 - Cl + 2Na \xrightarrow{dryethanol}$$

A. $CH_3 - CH_3$

B. $CH_2 = CH_2$
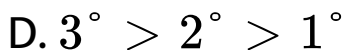
C. $CH_3 - CH_2 - CH_2 - CH_3$

D. $CH_3 - CH_2 - CH_3$

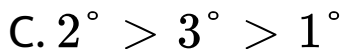**Answer: D**

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6. For dehyetohalogenation, the order of reactivity of alkyl halides considering E1 mechanism is

A. $1° > 2° > 3°$

B. $2° > 1° > 3°$

C. $2° > 3° > 1°$

D. $3° > 2° > 1°$
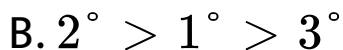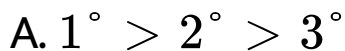
Answer: D

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7. Name two complexes which are used in medicines.

8. For a second-order reaction, what is the unit of the rate of the reaction

A. s^{-1}

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

C. $mol^{-1}Ls^{-1}$

D. $mol^{-2}L^2s^{-1}$

Answer: C

9. Which of the following molecules would have a carbon-halogen bond least susceptible to nucleophilic aromatic substitution reaction?

A. 2-Fluoropropane

B. 2-Chloropropane

C. 2-Bromopropane

D. 2-Iodopropane

Answer: B

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10. Write 1st 5 order and define What is spectrochemical series?

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11. IUPAC Name of K2[PdCl4]

12. In electrophilic substitution reactions of haloarenes, halogen atom is

    A. Slightly activating and o, p-directing

    B. Slightly deactivating and meta directing

    C. Slightly activating and meta directing

    D.

Answer: C

13. The s-orbital does not show preference to any direction because _____

    A. It is the smallest orbital

    B. It is present in every atom

    C. It is spherically symmetric

    D. It is the first orbital

Answer: B

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14. What are crystal fields?

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15. Chemical formula of Freon 12 is

A. CH_2F_2

B. CH_2CL_2

C. $\mathbb{C}LF_3$

D. $\mathbb{C}L_2F_2$
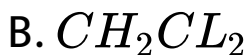
Answer: D

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16. The total number of atoms in one unit cell

of primitive unit cubic cell is _____ atom(s).

A. 1

B. 8

C. 4

D. 2

Answer: B

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17. What does the ratio 'space occupied/total space' denote?

A. Packing factor

B. Packing efficiency

C. Particle fraction

D. Packing unit

Answer: C

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18. Aluminium crystallises in a face-centred cubic lattice. The edge length of the unit cell of aluminium is 4.05 x 10-10m. What is the density of aluminium? (Atomic mass of Al=27)

A. $2700 kgm^{-3}$

B. $3000 kgm^{-3}$

C. $2400 kgm^{-3}$

D. $2100 kgm^{-3}$

Answer: D

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19. Gold (atomic mass 197 u) crystallises in a face-centred unit cell. What is its atomic radius

if the edge length of the gold unit cell is $0.407x10^{-9}m$?

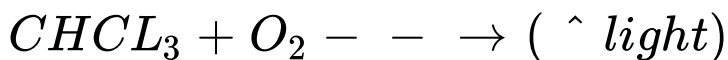A. 0.115 nm

B. 0.144 nm

C. 0.235 nm

D. 0.156 nm

Answer: D

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20. Why is butan-1-ol optically inactive but butan-2-ol is optically active?

21. What are the products obtained from the following   reaction?

$$CHCL_3 + O_2 - - \to (\hat{} \; light)$$

A. HCHO and HCl

B. HCOCl and HCl

C. $COCI_2$ and HCI

D. $COCI_2$ and HCOCI

Answer: C

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22. The radius of an atom of an element is 55 pm. What is the edge length of the unit cell if it is body-centred cubic?

A. 144.6 pm

B. 163.4 pm

C. 127.0 pm

D. 123.5pm

Answer: D

23. If 1 litre of a gas A at 500 mm and 0.5 litre of gas B at 800 mm are taken in a 2-litre bulb, the resulting pressure is:

A. 200

B. 300

C. 450

D. 500

Answer: D

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