The following are the processes occurring during flame atomization in atomic absorption spectrometry

1 point

A. Volatilization

B. Ionization

C. Nebulization

D. Desolvation

E. Dissociation

Arrange the processes in sequential order and choose the correct answer from below:

- C, B, A, D, E
- C, D, E, B, A
- A. C. D. B. E
- C, D, A, E, B

A mixture of p-anisaldehyde and formaldehyde in the presence of concentrated sodium hydroxide results in:

1 point

- 1. p-Methoxy sodium benzoate
- 2. Sodium-p-methoxy benzene
- 3. P-Methoxy benzyl alcohol
- 4. p-Methoxy benzoyl alcohol

Which one of the following compound is a precursor for the biosynthesis of cholesterol? 1 point

- Progesterone
- Lanosterol
- Cholic acid
- Coprostanol

1 point

Which one among the following drugs has the IUPAC name, $a,a,\overline{a},\overline{a}$ - tetramethyl 5- (1 H-1,2,4-triazole- 1-ylmethyl)-1,3-benzenediacetonitrile :

- Letrozole
- Anastrozole
- Exemestane
- Aminoglutethimide

The reaction between naphthalene and chromium trioxide in the presence of glacial acetic yields : 1 point

- Naphthalene-1,4-dione
- 4-Hydroxynaphthalen-1(4H)-one
- Naphthalene-1,2-dione
- 1-Hydroxynaphthalen-2(1H)-one

Platinum electrode surrounded by an outer tube, in which hydrogen passes entering through side inlet and escaping at the bottom through the test solution, is called as : 1 point

- Silver electrode
- Calomel electrode
- Standard hydrogen electrode
- Indicator electrode

Which of the following gives correct rank order from fastest to slowest of the relative rates in SN2 reaction of methyl bromide, tert-butyl bromide, isopropyl bromide and ethyl bromide : 1 point

- Methyl bromide > Ethyl Bromide > Isopropyl bromide > tert-Butyl bromide
- tert-Butyl bromide > Isopropyl bromide > Ethyl Bromide > Methyl bromide
- Ethyl bromide > Methyl Bromide > Isopropyl bromide > tert-Butyl bromide
- Methyl bromide > Ethyl Bromide > tert-Butyl bromide > Isopropyl bromide

Select the correct set of anticancer drugs that belong to "pyrimidine and related compounds" 1 point

- 5-Flurouracil, Tegafur, Decitabine, 5-Azacytidine
- 5-Flurouracil, Tegafur, Decitabine, Clofarabine
- Tegafur, Decitabine, 5-Azacytidine, Clofarabine
- Tegafur, Decitabine, 5-Azacytidine, Pentostatin

E2 elimination converts neomenthyl chloride into a mixture of the following compounds: 1 point

- 3-menthene (75%) and 2-menthene (25%)
- 4-menthene (75%) and 2-menthene (25%)
- 3-menthene (25%) and 5-menthene (75%)
- 1-menthene (50%) and 3-menthene (50%)

Ethyl-2 (p-chlorophenoxy)-2-methyl propionate is IUPAC name of : 1 point

- Fenofibrate
- Colestipol
- Clofibrate
- Colesevelam

Identify the vibrational modes shown by sulfur dioxide molecule in IR spectroscopy: 1 point

- Symmetric stretching and asymmetric stretching
- Symmetric stretching and scissoring
- Asymmetric stretching and scissoring
- Symmetric stretching, asymmetric stretching and scissoring

Establishing a complete structure of _____ is more complex problem than others. 1 point

- polysaccharide
- protein
- nucleic acid
- peptide

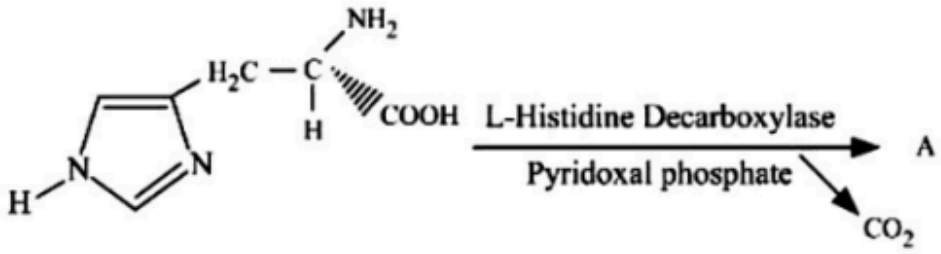
1 point

Which one is not the characteristics of the Hexose Monophosphate Pathway?

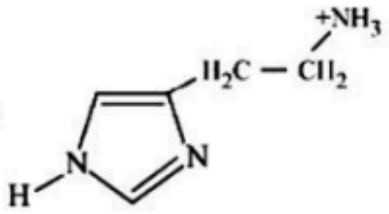
1. It produces CO_2
2. It requires ATP for phosphorylation
3. It is controlled by inhibition of glucose-6 phosphate dehydrogenase by NADPH
4. It produces ribose-5-phosphate

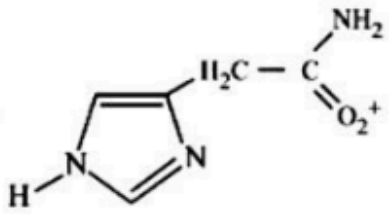
- (A)
- (B)
- (C)
- (D)

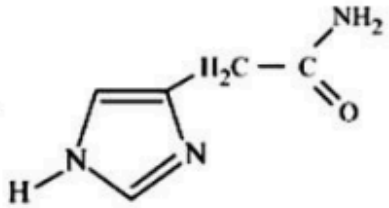
1 point

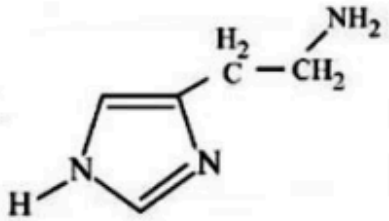


Select the correct product A of the above-given reaction from the four choices given below :

1. 

2. 

3. 

4. 

- (A)
- (B)
- (C)
- (D)

The law of relative lowering of vapour pressure was given by : 1 point

- Raoult
- Ostwald
- Henry
- Van't Hoff

Dipole-dipole weak interactions are also called as : 1 point

- London forces
- Debye interactions
- Electrovalent forces
- Keesom forces

The perfect orientation for a Diels-Alder reaction between the reactants is: 1 point

- Diene should be S-cis and reaction endo facing
- Diene should be S-cis and reaction exo facing
- Diene should be S-trans and reaction endo facing
- Diene should be S-trans and reaction exo facing

How would you prepare 2000 mL of 0.15 M NaOH aqueous solution? 1 point

- Dissolve 12 g of NaOH in distilled water and dilute to 2000 mL
- Dissolve 15 g of NaOH in distilled water and dilute to 2000 mL
- Dissolve 10 g of NaOH in distilled water and dilute to 2000 mL
- Dissolve 7.5 g of NaOH in distilled water and dilute to 2000 mL

Given below are two statements, one is labelled as Assertion and the other is labelled as Reason 1 point

Assertion (A): The disadvantage of atomic absorption spectroscopy is the need for each element to be analysed.

Reason (R): As atomic absorption spectrophotometer uses different halocathode lamp for each element, it is very specific for an individual element under test.

In light of the above statements, choose the correct answer from the options given below :

- Both A and R are true and R is the correct explanation of A
- Both A and R are true but R is NOT the correct explanation of A
- A is true but R is false
- A is false but R is true