

# CHEMISTRY

# **BOOKS - GRB CHEMISTRY (HINGLISH)**

# NOMENCLATURE AND CLASSIFICATION

Straight Objective Type

1. Correct IUPAC name of following compound is :

A. 2 - amino - 3 - formylbutan - 1, 4 - dioic acid

B. 2 - formyl - 3 - aminobutan - 1, 4 - dioic acid

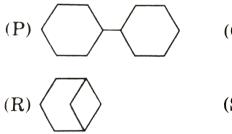
C. 3 - amino - 2 - formylbutan - 1, 4 - dioic acid

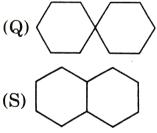
D. 2 - amino - 3 - carboxy - 4 - oxobutanoic acid

### Answer: A



2. Which of the following is/are a bicyclo compound (s)?





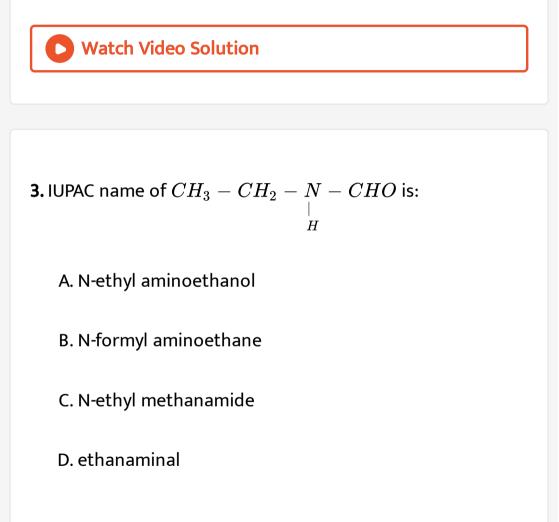
A. R only

B. R and S only

C. Q,R and S

D. P,Q,R and S

### Answer: B



Answer: C



**4.** The correct name of 1-methoxy-1-ethyl-2-methyl propane is:

A. 2-methyl-3-methoxy pentane

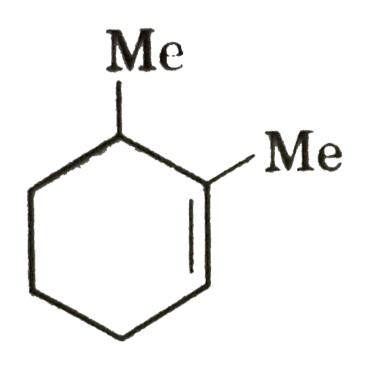
B. 1-methoxy-1-iso-propyl methane

C. 3-methoxy-4-methylpentane

D. 3-methoxy-2-methyl pentane

Answer: D

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IUPAC

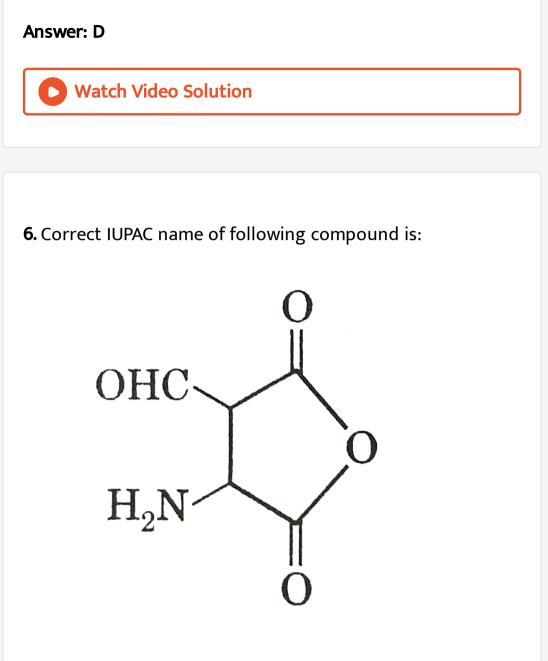
name of this compound is:

A. 1,2-dimethyl cyclohex-2-ene

B. 1,2-dimethyl cyclohex-1-ene

C. 2,3-dimethyl cyclohex-1-ene

D. 1-,6-dimethyl cyclohex-1-ene



A. 3-amino-2-formyl butane-1,4-dioic anhydride

B. 2-amino-3-formyl-1,2-epoxy butane-1,4-dione

C. 2-amino-3-formyl butane-1,4-dioic anhydride

D. 3-amino-2-formyl-1,2-epoxy butane-1,4-dione

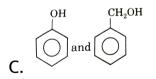
### Answer: C

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7. Which of the following are homoguces ?

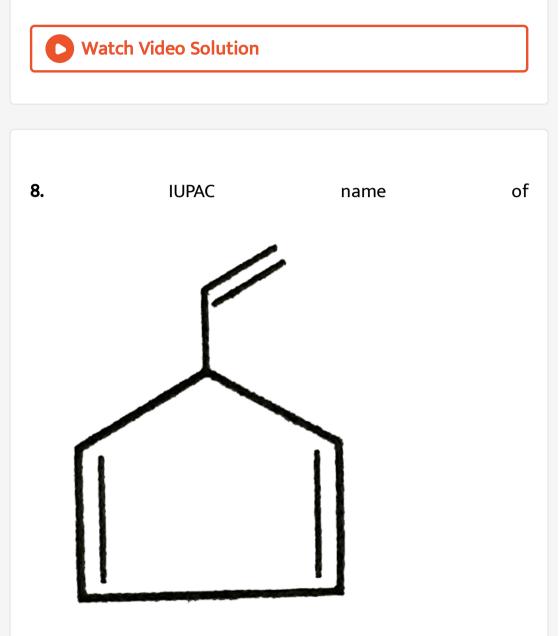
A. 
$$CH_{3}CH_{2}-NH_{2}$$
 and  $CH_{3}CH_{2}NH-CH_{3}$ 

B.  $CH_3-OH$  and  $CH_3CH_2CH_2CH_2CH_2$ 



D.  $CH_3COOH$  and  $CH_3 - COOCH_3$ 

# Answer: B



A. 5-ethenylcyclopenta-1,3-diene

B. 3-ethenylcyclopenta-1-,4-diene

C. 1-ethenylcyclopenta-2,4-diene

D. 2-ethenylcyclopenta-1,3-diene

### Answer: A

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**9.** Number of  $1^{\circ}, 2^{\circ}$  and  $3^{\circ}$  hydrogen in isooctane is :

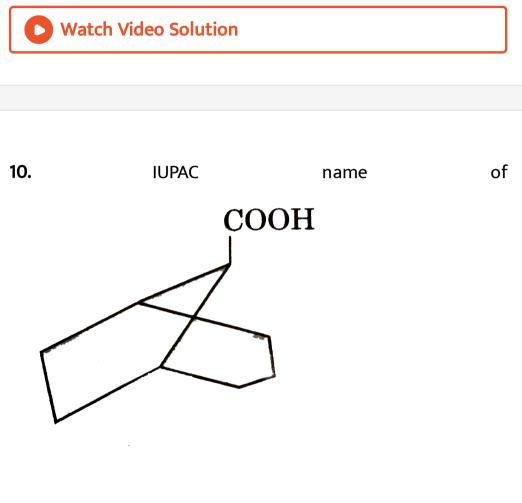
A. 9, 8, 1

B. 12, 5, 1

C. 15, 2, 1

D. none of these

# Answer: C



A. bicyclo-[3,1,1]-octane-2-oic acid

B. bicyclo-[3,2,1]-octane-1-carboxylic acid

C. bicyclo-[3,2,1]-octane-8-oic acid

D. none of the above

# Answer: D



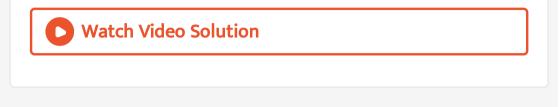
11. Select the option having correctly named compound(s).

- (P) 3,3-dimethyl-1-hydroxycyclohexane
- (Q) 4-ethoxy-2-metyhoxypentane-3-one
- (R) 2-ethyl-1-,1dimethylcyclopentane
- (S) 4-amino-2-hydroxy-4-oxobutanal
  - A. P,Q and R
  - B. R only
  - C. Q and S

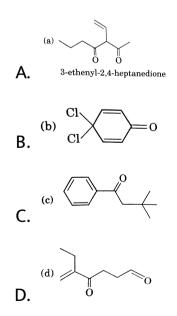
D. Q only

## Answer: B

?



12. Which of the following compound is not named correctly



# Answer: D



13. Correct name for  $(C_2H_5)_2C = C(CH_3)CH_2CO_2H$  is:

A. 4,4-diethyl-3-methyl-3-butenoic acid

B. 4-ethyl-3-methyl-3-hexenoic acid

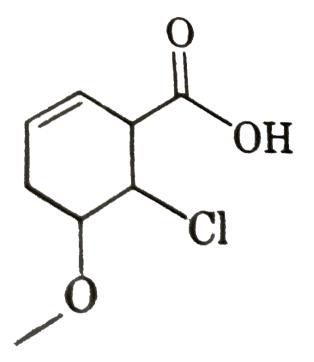
C. 3-ethyl-4-methyl-3-hexenoic acid

D. 3-ethyl-4-methyl-3-hexene-6-oic acid

#### Answer: B

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14. IUPAC name of following is:



A. 2-chloro-3-methoxy cyclohex-5-ene carboxylic acid

B. 6-chloro-5-methoxy cyclohex-2-ene carboxylic acid

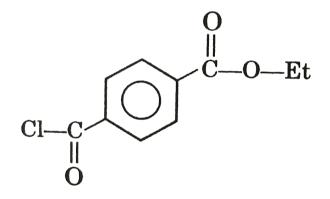
C. 6-chloro-5-methoxy cyclohex-2-enoic acid

D. 2-chloro-3-methoxy cyclohex-5-enoic acid

# Answer: B

**15.** IUPAC name of following compoung is:

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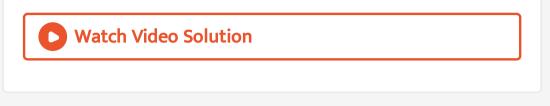
A. 4-ethoxycarbonyl benzoyl chloride

B. ethyl 4-chlorocarbonyl benzene carboxylate

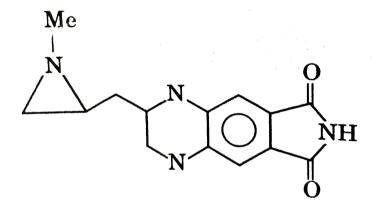
C. ethyl 4-chloroformyl phenyl methanoate

D. ethyl 4-chlorocarbonyl benzoate

# Answer: D



**16.** Identify total number of  $2^{\circ}$  amines in given compound ?



A. 1

B. 2

C. 3

D. 4

# Answer: B

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17. Select odd one out:

A. Isooctane

B. Isoheptane

C. Isononane

D. Isopentane

Answer: A

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**18.** Write the correct IUPAC name of 2-amino-1, 3,7-trihydroxy hept-4-ene-1, 7-dione?

A. 6-amino-5-hydroxy hept-3-ene-1,7-dioicacid

B. 2-amino-3-hydroxy hept-4-ene-1,-7,dioicacid

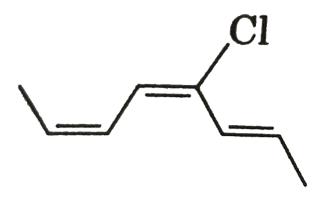
C. 6-amino-5-hydroxy hept-4-ene-1-,7-dicarboxylic acid

D. 6-amino-5-hydroxy hept-3-ene-1,7-dicarboxylic acid

#### Answer: A

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**19.** What is the correct IUPAC name of the following compound ?



A. (2E,4Z,6Z)-4-chloro oct-2,4,6-triene

B. (2Z,4E,6E)-5-chloro oct-2,4,6-triene

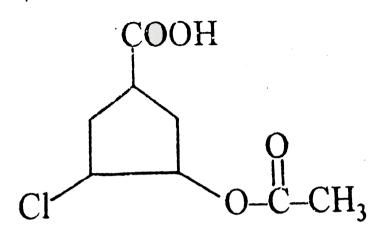
C. (2E,4E,6Z)-4-chloro oct-2-,4,6-triene

D. (2Z,4Z,6E)-5-chloro oct-2,4,6-triene

Answer: C



**20.** What will be the correct IUPAC name of the following compound ?

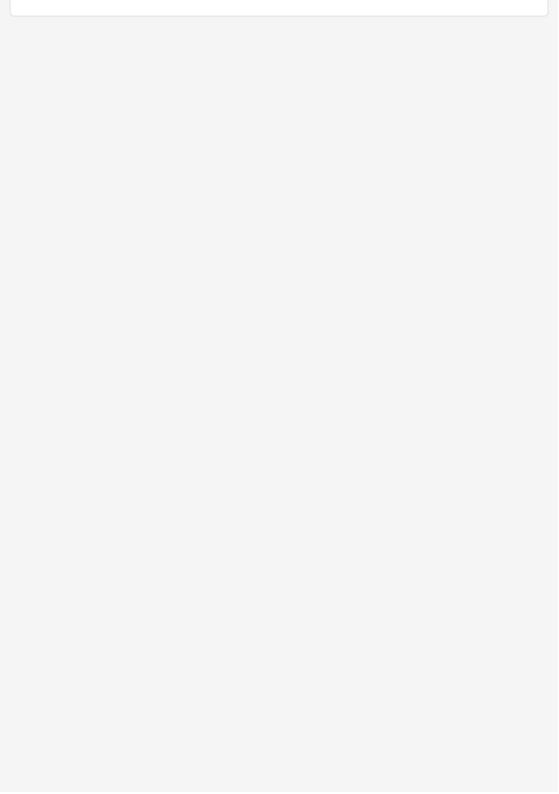


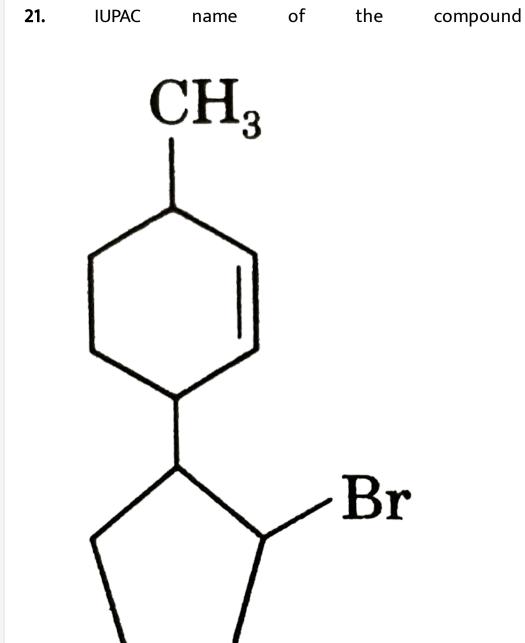
A. 3-ethanoyl oxy-4-chloro cyclopentanoic acid

B. 3-chloro-4-ethanoyloxy cyclopentanoic acid

- C. 3-chloro-4-ethanoyloxy cyclopentane carboxylic acid
- D. 3-ethanoyl oxy-4-chloro cyclopentane carboxylic acid

### Answer: C





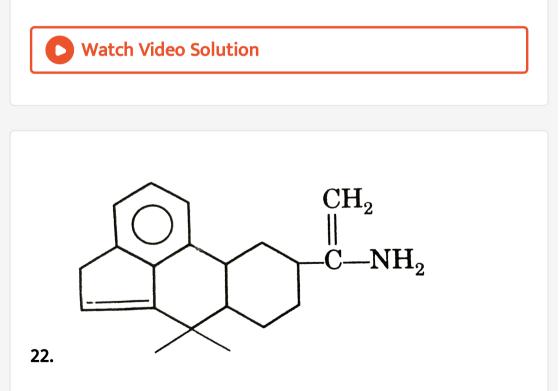
A. 3-(2-bromo cyclopentyl)-6-methyl-cyclohex-1-ene

B. 3-methyl-6-(2-bromo cyclopentyl)-cyclohex-1-ene

C. 1-methyl,4-(2-bromo cyclopentyl)-cyclohex-2-ene

D. 4-methyl-1-(2-bromo cyclopentyl)-cyclohex-2-ene

#### Answer: A



Degree of unsaturation in the above compound is:

A. 7

B. 8

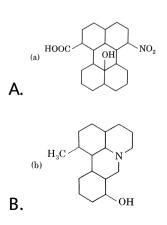
C. 9

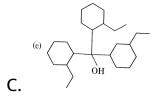
D. 10

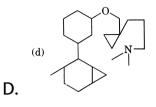
Answer: C

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23. Which of the following is a heterocyclic compound ?



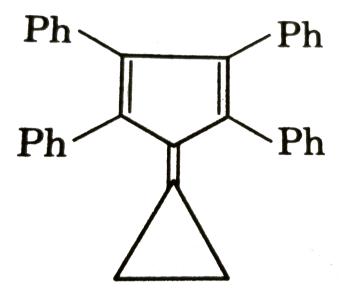




# Answer: B



for



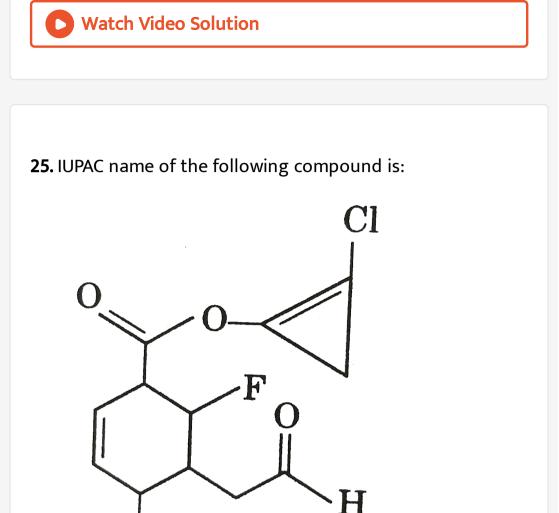
A. 20

B. 21

C. 22

D. 33

**Answer: B** 



A. (2-chlorocyclopropenyl)-4-chloro-2-floror-3-[2-

oxoformyl]cyclohex-5-enecarboxylate

Cl

B. (2-chlorocyclopropenyl)-4-chloro-6-floror-5[2-oxoethyl]

cyclohex-2-enecarboxylate

C. (2-chlorocyclopropenyl)-4-chloro-6-floro-

5[formymethyl] cyclohanecarboxylate

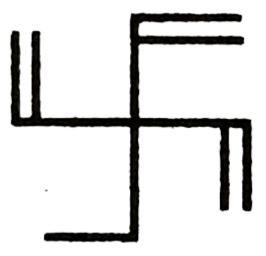
D. (2-chlorocyclopropenyl)-4-chloro-2-floro-3-

[formylmethyll] cyclohex-5-enecarboxylate

Answer: B



26. Given IUPAC name of the following compound :



A. 3,3,-diethenyl pent-1-ene

B. 3,3-diethenyl pent-4-ene

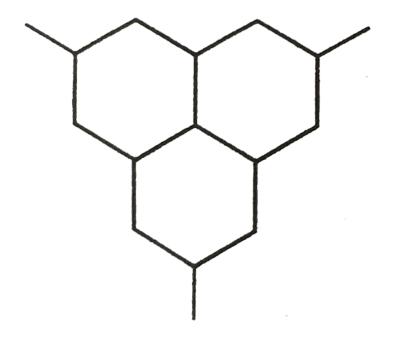
C. 3-ethenyl-3-ethyl penta-1,4-diene

D. 3,3,3 triethenyl propane

## Answer: C



**27.** Total numbe of  $3^{\circ}$  hydrogens present in given compound are :

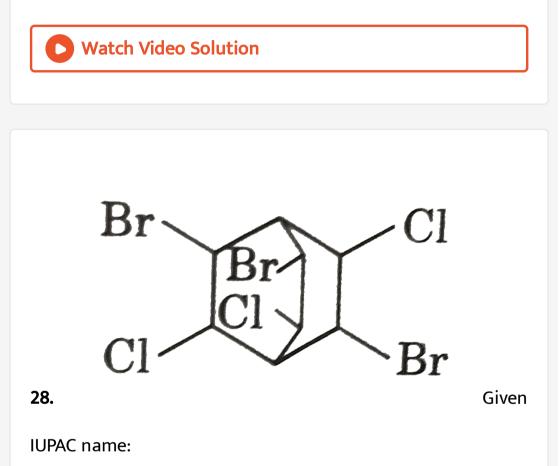


A. 7

B. 5

C. 4

# Answer: A



A. 3,6,8-trichloro-2,5,7-tribromo bicyclo [2.2.2] octane

B. 2,5,7-tribromo-3,6,8-trichloro bicyclo [2.2.2] octane

C. 3,6,8-tribromo-2,5,7-tribromo bicyclo [2.2.2] octane

D. 2,5,7-trichloro-3,6,8-trichloro bicyclo [2.2.2] octane

#### Answer: B

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**29.** Which among the following is correct IUPAC name?

A. 1,1-dimethyl cyclohexan-3-ol

B. 4-methyl bicylo [3.2.0] heptane

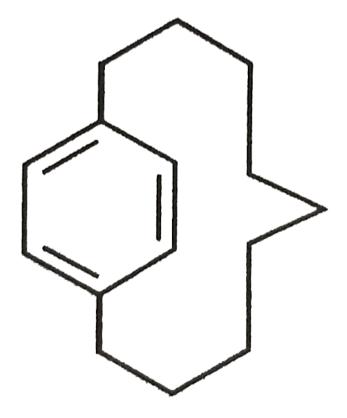
C. Butane-1,2-dione

D. 5-ethyl-3-methyl cyclohexene

#### Answer: D



**30.** Degree of unsaturation and  $\sigma$  bond in the following compound is



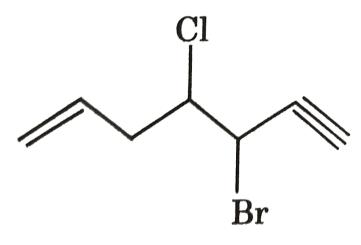
B. 5,36

C. 5,38

D. 4,38

Answer: C





31.

IUPAC name of given compound is:

A. 3-bromo 4-chlorohept-1-en-6-yne

B. 5-bromo 4-chlorohept-1-en-6-yne

C. 3-bromo 4-chlorohept-6-en-1-yne

D. 5-bromo 4-chlorohept-6-en-1-yne

Answer: B

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**32.** In which of the following compound there is absence of

secondary carbon ?

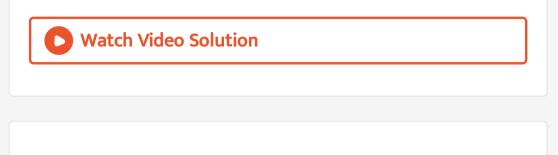
A. 2,3,3,4-tetra methyl pentane

B. 2,2,3,3-tetramethyl pentane

C. 3-ethyl-2,4-dimethyl pentane

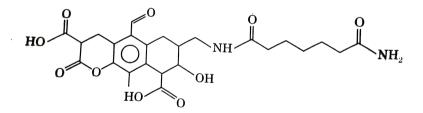
# D. 3-ethyl pentane

## Answer: A



33. How many functional groups are present in following

compound ?

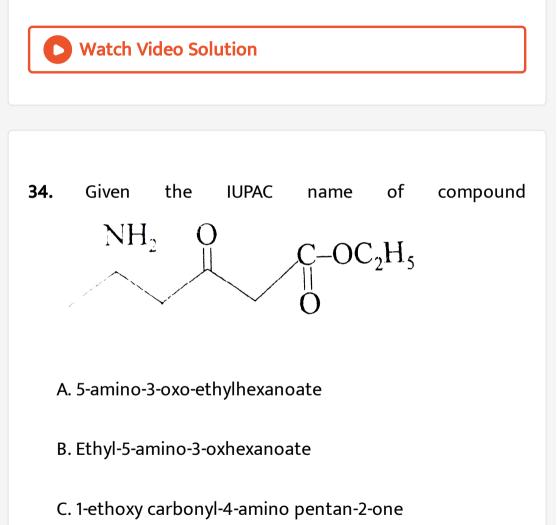


A. 6

B. 8

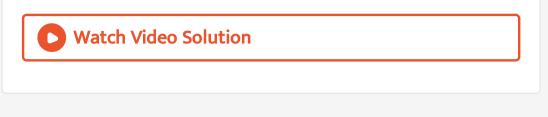
C. 7

#### Answer: B

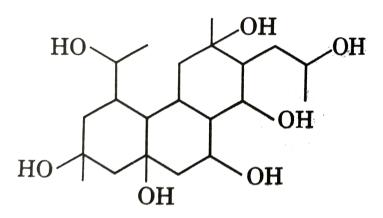


D. 5-amino-1-ethoxy-hexane-1,3-dione

## Answer: B



**35.** Number of  $2^{\circ}$  alcoholic group present in structure



A. 3

B. 2

C. 4

D. 5

# Answer: C

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36. Which of the following a triad of homologous series ?

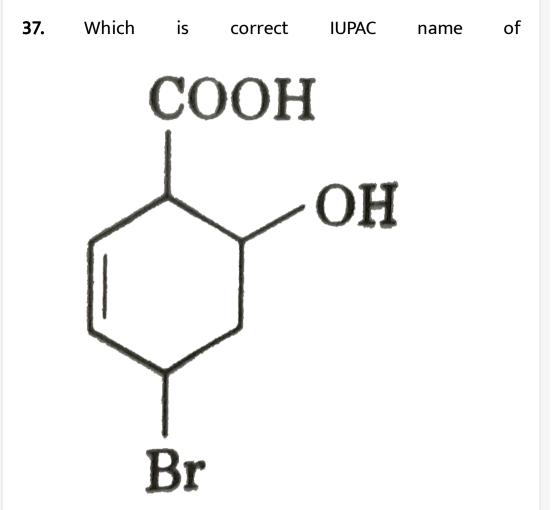
A. Butane-2-one, butanal, 1,4-epoxy butane

B. Ethylamine, methyl propyl amine, proply amine

C. Dimethyl amine, ethyl methyl amine, diethyl amine

D. Phenol, bezyl alcohol, o-cresol

#### Answer: C



A. 4-bromo-2-hydroxy cyclohex-5-ene-1-oic acid

B. 4-bromo-2-hydroxy cyclohex-5-ene-1-carboxylic acid

C. 4-bromo-6-hydroxy cyclohex-2-ene-1carboxylic acid

D. 4-bromo-6-hydroxy cyclohex-2-ene-1-oic acid

### Answer: C



**38.** Which compound is not smallest number of their corresponding homogous series ?

A. Acetone

B. Acetylene

C. Acetic acid

D. Ethylene

Answer: C

**39.** Number of carboxylic acid groups present in picric acid is/are:

A. 1 B. 2 C. 0

D. 3

Answer: C



**40.** Degree of unsaturation for tartaric acid is:

A. 2

B.4

C. 1

D. 3

Answer: A

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**41.** The compound which has one isopropyl group is :

A. 2,2,3,3,-tetramethyl pentane

B. 2,2-dimethyl pentane

C. 2,2,3-trimethyl pentane

D. 2-methyl pentane

# Answer: D

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**42.** The group of heterocylic compounds is:

A. Phenol, Furane

B. Furane, Thiophene

C. Thiophene, Phenol

D. Furane, Aniline

#### Answer: B



**43.** The molecular formula of the first member of the family of alkenynes and its name is given by the set :

A.  $C_3H_2$ , Alkene

B.  $C_5H_6$ , Pent-1-en-3-yne

C.  $C_6H_8$ , Hex-1-en-5-yne

D.  $C_4H_4$ , Butenyne

#### Answer: D

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**44.** The correct IUPAC name of the compound:

 $CH_{3}-CH_{3}-\stackrel{CH_{3}}{C}=C-\stackrel{CH_{3}}{CH_{3}-CH_{3}-CH_{3}-CH_{3}-CH_{3}-CH_{2}-CH_{2}-CH_{2}-CH_{3}-CH_$ 

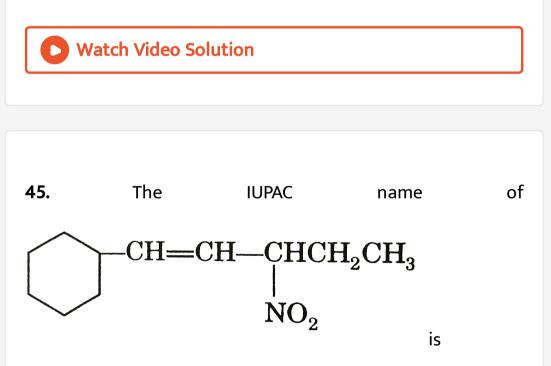
A. 5-ethyl3,6-dimethyl non-3-ene

B. 5-ethyl-4,7-dimethyl non-3-ene

C. 4-methyl-5,7-diethyl oct-2-ene

D. 2,4-ethyl-5-methyl oct-2-ene

#### Answer: A



A. 1-cyclohexyl-3-nitropent-1-ene

B. 3-nitro-5-cyclohexylpene-1-ene

C. 1-cyclohexyl-3-ethyl-3-nitroprop-1-ene

D. 3-cyclohexyl-1-ethyl-1-nitroprop-2-ene

#### Answer: A

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**46.** The IUPAC name of  $CH_3CH_2 - N - CH_2CH_3$ is:

A. N-Methyl-N-ethyl ethanamine

B. Diethyl methanamine

C. N-Ethyl-N-methyl ethanamine

D. Methyl diethyl amine

# Answer: C

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**47.** The IUPAC name of acetyl acetone is:

A. Pentane-2-,5-dione

B. Pentane-2-,4-dione

C. Hexane-2-,4-dione

D. Butane-2-,4-dione

#### Answer: B

**48.** The correct IUPAC name of  $CH_3 - CH_2 - C = C - COOH$  is:

A. 2-methyl butanoic acid

B. 2-ethylprop-2-enoic acid

C. 2-carboxybutene

D. none of the above

Answer: B

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**49.** The correct IUPAC name of 2-ethylpent-3-yne is:

A. 3-methyl hex-4-yne

B. 4-ethyl pent-2-yne

C. 4-methyl hex-2 yne

D. none of these

#### Answer: C



**50.** The IUPAC name of the compound  $CH_3CH = CHCH = CHC = CCH_3$  is:

A. Octa-4,6-dine-2-yne

B. Octa-2,4-diene-6-yne

C. Oct-2-yne-4,6-diene

D. Oct-6-yne-2,4-diene

## Answer: B

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**51.**  $C_3H_6Br_2$  can shown:

A. two gem dibromide

B. two vic dibromide

C. four total dibromo derivatives

D. all of the above

Answer: A

**52.** The IUPAC name of the compound Br(CI)CI.  $CF_3$  is:

A. 2-bromo-2-chlor-2-iodal1,1,1-trifluoroethane

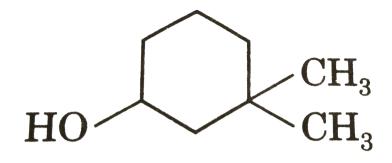
B. 1-1,1-trifluroro-2-bromo-2-chloro-2-iodo- ethane

C. 2-bromo-2-chloro-1,1,1-trifluoro-2-iodo ethane

D. 1-bromo-1-chloro-2,2,2-trifluoro-1-iodo ethane

Answer: D

53. The IUPAC name of the given compound is:



A. 1,1-dimethyl-3-hydroxy cyclohexane

B. 3,3-dimethyl-1-hydroxy cyclohexane

C. 3,3-dimethycyclohexanol

D. 1,1-dimethylcyclohexan-3-ol

#### Answer: C

**54.** The IUPAC name of  $(C_2H_5)_2NCH_2CH.\ COOH$  is:

A. 2-chloro4-N-ethylpentaonic acid

B. 2-chloro-3-(N,N-diethyl amino)-propanoic acid

C. 2-chloro-2-oxo diethylamine

D. 2-chlor-2-carboxy-N-ethyl ethane

Answer: B



55. The IUPAC name of the compound is:

$$CH_3-CH-CH-CH-NH_2 egin{array}{c} Ph \ dots \ CH_3-CH-CH-NH_2 \ CH_3 \end{array}$$

A. 1-amino-1-phemny-1-phenyl-2-methyl propane

B. 2-methyl-1-phenyl propan-1-amine

C. 2-methyl-1-amino-1-phenyl propane

D. 1-isopropyl-1-phenyl methyl amine

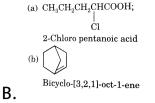
Answer: B

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56. Which of the following compound is wrongly named ?

A.  $CH_3CH_2CH_2CHCOOH$ 

2-chloro pentanoic acid

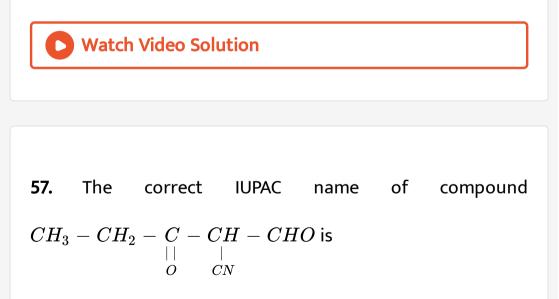


# Bicyclo-[3,2,1]-oct-1-ene

# C. $CH_3CH_2CH = CHCOCH_3$ , Hex-3-en-2-one

# D. $CH_3 - CHCH_2CH_2CHO \ ert \ CH_3 \ -CH_3 \ 4 - ext{methyl pentanal}$

#### **Answer: B**



A. 2-cyano-3-oxopentanal

- B. 2-formyl-3-oxopentanenitrile
- C. 2-cyanopentane-1-,3-dione
- D. 1,3-dioxo-2-cyanopentane

#### Answer: B



58. IUPAC name of :  $CH_3 - CH_2 - \displaystyle \underset{|| \ CH_3 \ O}{CH_3} - \displaystyle \underset{|| \ CH_3 \ O}{CH_3} - \displaystyle \underset{|| \ CH_3 \ O}{CH_3}$ 

A. Ethyl-4-methyl-3-oxo pentanoate

B. 2-ethoxy carbonyl pentan-3-one

C. 4-ethoxy carbony pentan-3-one

D. Ethyl 2-methyl 3-oxo-pentanoate

# Answer: D



# 59. The IUPAC name of compound

 $CH_3- egin{array}{ccc} O & CH_3 \ ert \ H_3 - CH_3 - CH_3 - CH_3 - CH_3 - CH_3 \ ert \ H_3 \ ert \ H_3 \ CH_3 \ CH_3 \ CH_3 \end{array}$  is:

A. 3,5-dimethyl-4-formyl pentanone

B. 1-isopropyl-2-methyl-4-oxo butanol

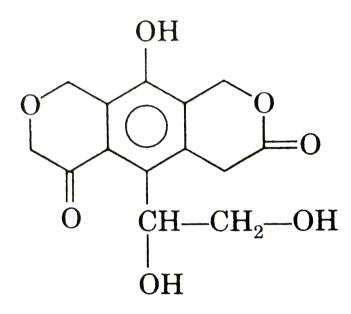
C. 2-isopropyl-3-methyl-4-oxo pentanal

D. none of the above

Answer: C



**60.** Total number of functional groups in following compound is:



A. 4

B. 5

C. 6

D. 3

# Answer: C

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**61.** One among the following is the correct IUPAC name for N-ethyl-1-amino methanal.

A. N-formyl aminoethane

B. N-ethyl formyl amine

C. N-ethyl methanamide

D. Ethylamino methanal

Answer: C



**62.** The IUPAC name of cinnamic acid is:

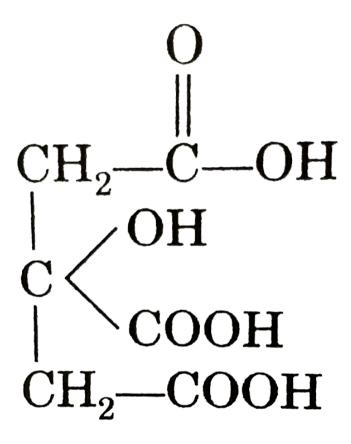
A. 2,3-dihydroxy butane dioic acid

B. 1-pheny-2-carboxy ethane

C. 3-phenyl prop-2-enoic acid

D. dihydroxy-3-phenyl propionic acid

Answer: C



is:

A. 1,2,3-tricarboxypropane-1-ol

B. 2-hydroxy propane-1,2,3-tricarboxylic acid

C. 3-hydroxy-3-carboxypent-1,5-dioic acid

D. none of the above

#### Answer: B



64. 
$$CH_3 - O - C - CH_2 - COOH$$

The correct systematic name of the above compound is :

A. 2-acetoxy ethanoic acid

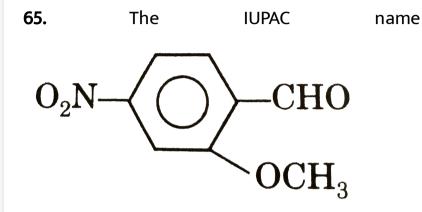
B. 2-methoxy carbonyl ethanoic acid

C. 3-methoxy-3-oxopropanoic aicd

D. 2-methoxy formyl acetic acid

#### Answer: B





of

- A. 2-methoxy-4-nitro benzaldehyde
- B. 4-nitro anisaldehyde
- C. 3-methoxy-4-formyl nitro benzene
- D. 2-formyl-4-nitro anisole

### Answer: A



66. The IUPAC name of compound

 $H_3COOC-CH - COOCH_3$  is:  $ert_{CH_2OH}$ 

A. 2-(hydroxy methyl)methyl propanedioate

B. dimethyl-2-(hydroxy methyl) propanedioate

C. 2-(hydroxy methyl)dimethyl propanedioate

D. none of the above

Answer: B



67. Which of the following is crotonic acid?

A.  $CH_2 = CH - COOH$ 

 $\mathsf{B}.\,C_6H_5-CH=CH-COOH$ 

C.  $CH_3 - CH = CH - COOH$  CH - COOHD. ||CH - COOH

Answer: C

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68. Which of the following pairs have absence carbocyclic

ring in both compounds ?

A. Pyridine, Benzene

B. Benzene, Cyclohexane

C. Cyclohexane, Furane

D. Furane, Pyridine

#### Answer: D

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69. when vinyl and allyl are joined each other, we get:

A. Conjugated alkadiene

B. Cumulative alkadiene

C. Isolated alkadiene

D. Allenes

#### Answer: C





**70.** The IUPAC name of the following structure  $(CH_3)C. C. C. (CH_3)CH(CH_3)$  is:

A. 3-methylhex-4-yn-2-ene

B. 3-methylhex-2-en-4-yne

C. 4-methylhex-4-ene-4-yne

D. All are correct

**Answer: B** 



**71.** The IUPAC name of the following structure is  $[CH_3CH(CH_3)]_2C(CH_2CH_3)C(CH_3)C(CH_2CH_3)_2$ 

A. 3-,5-diethyl-4,6-dimethyl-5-1-methylethylhept-3-ene

B. 3,5-diethyl-5-isopropyl-4,6-dimethylhept-2-ene

C. 3,5-diethyl-5-propyl-4,6-dimethylhept-3-ene

D. None of the above

Answer: A

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72. All the following IUPAC names are correct except:

A. 1-chloro-1-ethoxypropane

B. 1-amino-1-ethoxypropane

C. 1-ethoxypropan-2-ol

D. 1-ethoxypropan-1-amine

#### Answer: B



**73.** The IUPAC name of  $\beta$ -ethoxy- $\alpha$ -hydroxy propionic acid (trivial name) is:

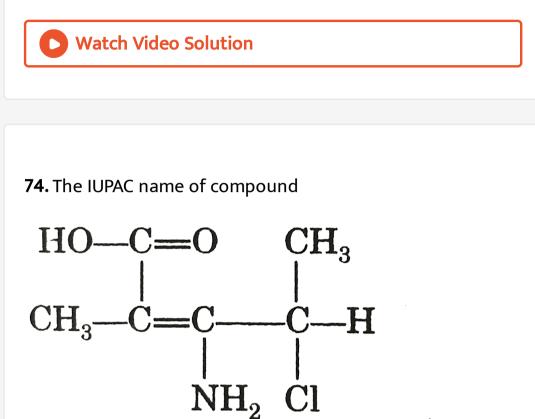
A. 1,2-dihydroxy-1-oxo-3-ethoxy propane

B. 1-carboxy-2-ethoxy ethanol

C. 3-ethoxy-2-hydroxy propanoic acid

D. All of the above

# Answer: C



is

A. 2-amino-3-chloro-2-methylpent-2-enoic acid

B. 3-amino-4-chloro-2-methylpent-2-enoic acid

C. 4-amino-3-chloro-2-methylpent-2-enoic acid

D. All of the above

# Answer: B



# 75. The IUPAC name of

# $BrCH_2 - CH - CO - CH_2 - CH_2CH_3$ is:

# A. 2-bromomethyl-3-oxohexanamide

# B. 1-bromo-2-amino-3-oxohexane

# C. 1-bromo-2-amino-n-propyl ketone

# D. 3-bromo-2-propyl propanamide

#### Answer: A



**76.** The IUPAC name of  $CH_2 - CH - CH_2$  is:  $ert \ CN \ CN \ CN \ CN$ 

A. 1,2,3-tricyano propane

B. Propane-1,2,3-trinitrile

C. 1,2,3-cyano propane

D. Propane-1,2,3-tricarbonitrile

### Answer: D

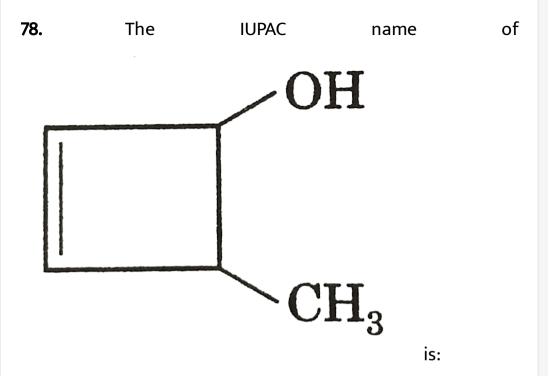


77. The systematic name of

$$CH_3- egin{array}{c} C-O-CH_2- egin{array}{c} C-OH \ ert ert \ er$$

- A. 1-acetoxy acetic acid
- B. 2-acetoxy ethanoic acid
- C. 2-methoxycarbonyl ethanoic acid
- D. 2-ethanoyloxyethanoic acid





A. 3-methyl cyclobut-1-ene-2-ol

B. 4-methyl cyclobut-2-ene-1-ol

C. 4-methyl cyclobut-1-ene-3-ol

D. 2-methyl cyclobut-3-ene-1-ol

## Answer: B



79. The IUPAC name of

$$CH_2-CHO$$
  $|$  is:  $OHC-CH_2-CH_2-CH_2-CH_2-CH_2-CH_2$ 

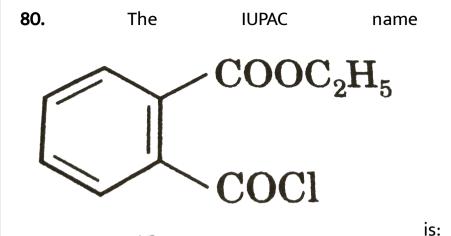
A. 4,4-di(formylmethyl) butanal

B. 2-(formymethyl) butane-1,4-dicarbaldehyde

C. Hexane-3-acetal-1,6-dial

D. 3-(formylmethyl) hexane-1,6-dial





A. 2-chlorocarbonyl ethylbenzoate

B. 2-carboxyethyl benzoyl chloride

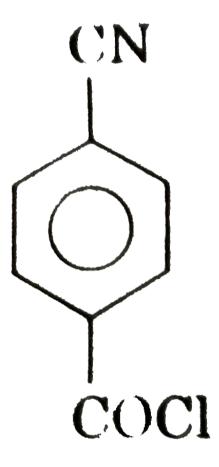
C. Ethyl-2-(chlorocarbonyl) benzoate

D. Ethyl-1-(chlorocarbonyl) benzoate

## Answer: C

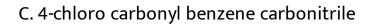


**81.** Select the correct IUPAC name of the following compound:



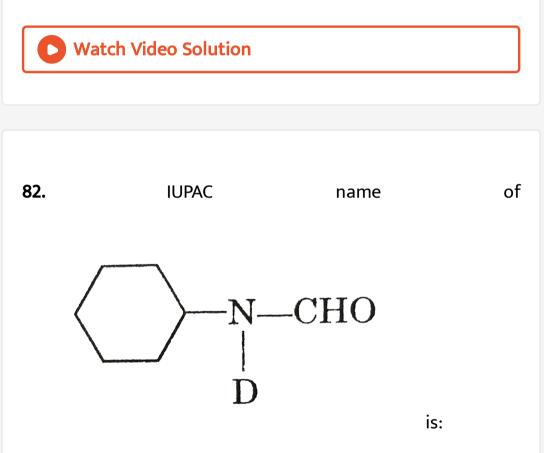
A. 4-chloro carbonyl benzonitrile

B. 4-cyano benzene carbonyl chloride



D. 4-carbylamino benzene carbonyl chloride

## Answer: B



# A. N-Deutero-N-formylcyclohexanamine

B. N-Cyclohexylamino-N-deuteromethanal

C. N-Cyclohexyl-N-deuteromethanamide

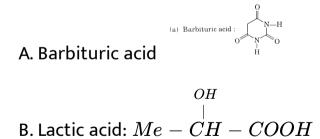
D. N-Deutero cyclohexanaminal

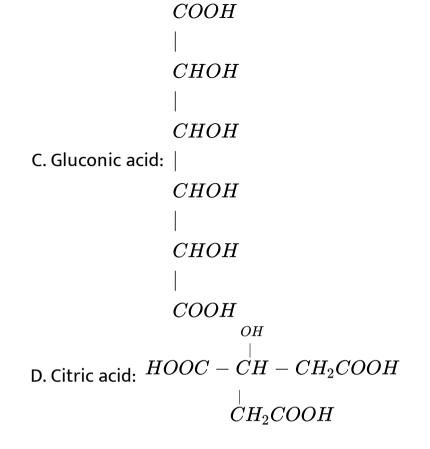
# Answer: C

?

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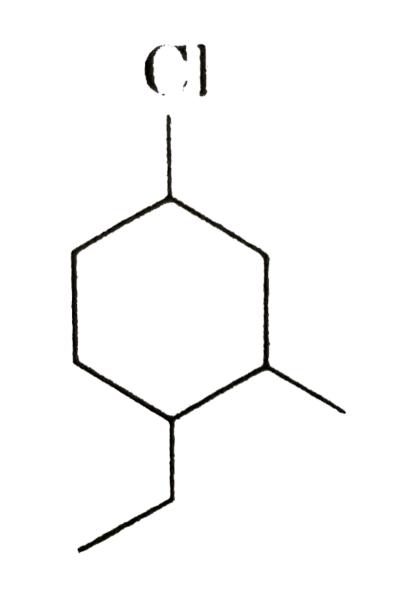
# 83. Which of the following compound is not named correctly





Answer: C





name

of the compound is:

84.

A. 5-chloro-2-ethyl-1-methyl cyclohexane

B. 1-chloro-4-ethyl-3-methyl cyclohexane

C. 1-ethyl-2-methyl-4-chloro cyclohexane

D. 4-chloro-1-ethyl-2-methyl cyclohexane

## Answer: D



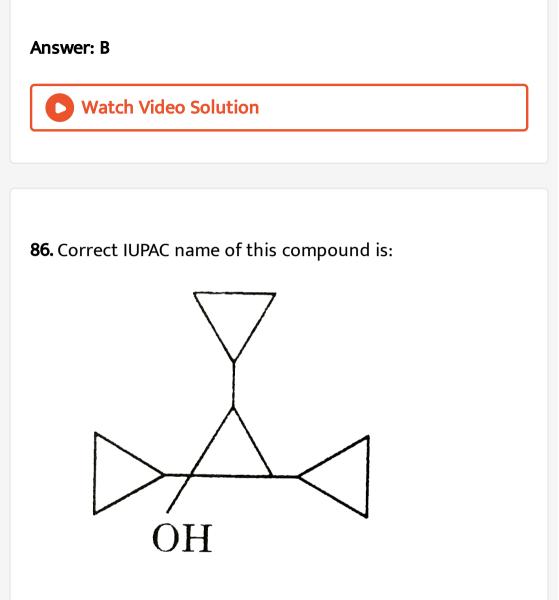
# **85.** The correct IUPAC name of 1,3-dibromo butane-1-one is:

A. 2-,4-dibromo butan-4-one

B. 3-bromo butanoyl bromide

C. 3-bromo-3-methyl propanoyl bromide

D.  $\beta$ -bromo butyryl bromide



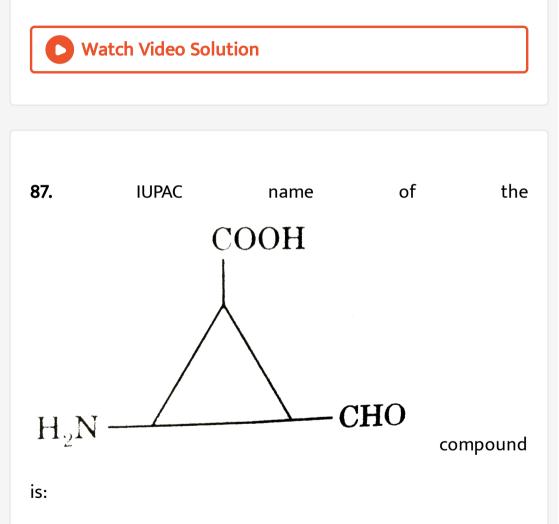
A. tetracyclopropanol

B. 1,2,3-tricyclopropyl cyclopropanol

C. cyclopropan-1,2,3-tricyclopropane-2-ol

D. 1-hydroxy-1-2,-3-tricyclopropyl cyclopropane

#### Answer: B



# A. 3-amino-2-formyl cyclopropane carboxylic acid

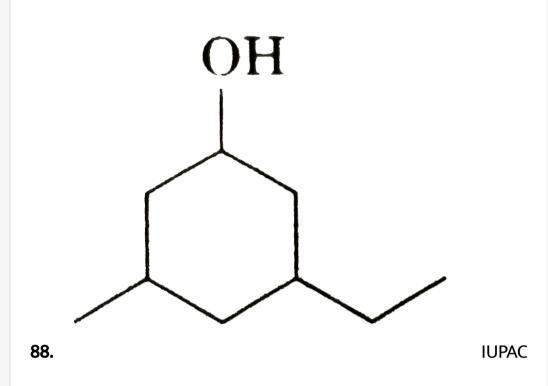
B. 2-amino-3-formyl cyclopropane carboxylic acid

C. 3-amino-2-formyl cyclopropanoic acid

D. 2-amino-3-formyl cyclopropanoic acid

Answer: B





# name of the compound is:

A. 3-ethyl-5-methyl phenol

B. 5-methyl-3-ethyl phenol

C. 5-methyl-3-ethyl cyclohexanol

D. 3-ethyl-5-methyl cyclohexanol



**89.** The compound which has one isopropyl group is :

A. 2,2,3,3-tetramethylpentane

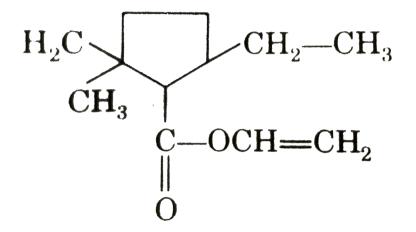
B. 2,2-dimethylpentane

C. 2,2-3-trimethylpentane

D. 2-methylpentane



90. Given correct IUPAC name of:



A. Ethyl-2-ethyl-5,5 dimethyl cyclopentane carboxylate

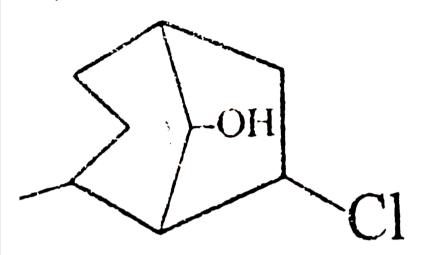
B. Ethenyl-2-ethyl-5,5-dimethyl cyclopentane carboxylate

C. Ethenyl-5-ethyl-2-,2-dimethyl cyclopentanoate

D. Ethenyl-5-ethyl-2,2-dimethyl cyclopentane carboxylate



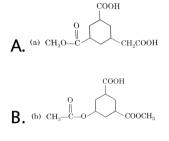
**91.** What will be the correct IUPAC name for the following compound.

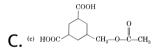


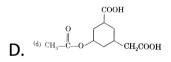
- A. 7-chloro-2-methyl bicyclo [3,2,1] octan-1-ol
- B. 7-chloro-2-methyl bicyclo [3,2,1] octan-8-ol
- C. 2-chloro-7-methyl bicyclo [3,2,1] octan-8-ol
- D. 2-chloro-7-methyl bicyclo [3,2,1] octan-1-ol

#### Answer: B

# **92.** The structure of 3-(Carboxymethyl) 5-ethanoyloxy cyclohexane carboxylic acid is

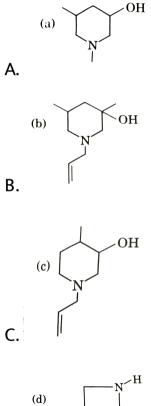


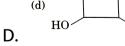






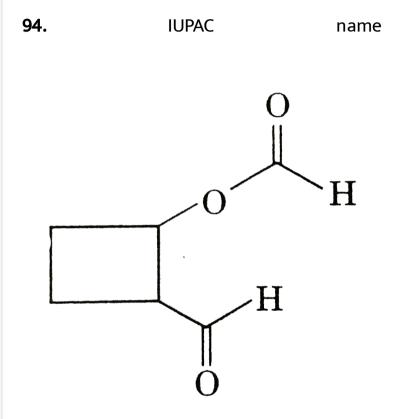
**93.** An organic compound A was found to contain DU 2, one  $2^{\circ}$  alcoholic group, one  $3^{\circ}$  amine and one  $3^{\circ}$  carbon atom compound A can be:





# Answer: C





of

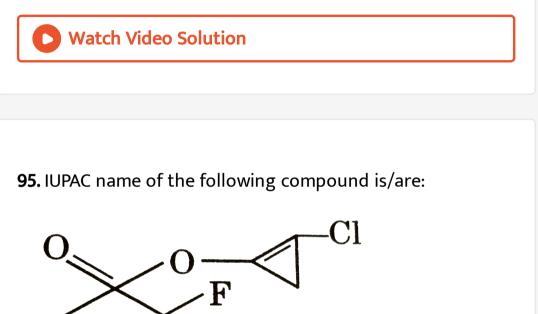
A. Cyclobutane-1-carbaldehyde-2-carboxylate

B. 2-formyl cyclobutane carboxylate

C. 2-formyclcyclobutyl methanoate

D. 2-methanoyloxy cyclobutane carbaldehde

# Answer: C



F Cl H

A. (2-chlorocyclopropenyl)-4-chloro-2-fluoro-3

oxoformyl] cyclohex-5-ene-1-carboxylate

B. (2-chlorocyclopropenyl)-4-chloro-6-fluoro-5 [2-oxoethyl]

cyclohex-2-ene-1-carboxylate

C. (2-chlorocyclopropenyl)-4-chloro-6-fluoro-5

[formylmethyl] cyclohexane-1-carboxylate

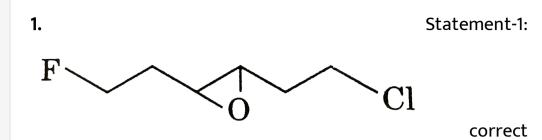
D. (2-chlorocyclopropenyl)-4-chloro-2-fluoro-3

[formymethyl] cyclohe-5-ene-1-carboxylate

Answer: B

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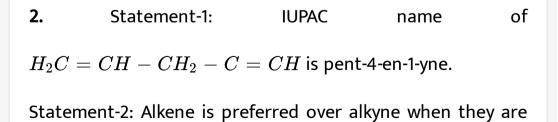
Reasoning Type



IUPAC name of this compound is 1-chloro-6-fluoro-3,4epoxyhexane.

Statement-2: CI and F both are groups without suffix, CI comes before F in alphabetical order so numbering is done from this end.





placed at same position.

A. Both the statements are correct and Statement 2 is

the correct explanation of Statement 1

B. Statement 1 is correct but Statement 2 is wrong

C. Both the statements are correct but Statement 2 is

not the correct explanation of Statement 1

D. Statement 1 is Incorrect but Statement 2 is correct

Answer: D

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3. Statement-1: 4-ethyl-3-bromo pentanoic acid is not the

correct IUPAC name.

Statement-2: Selection of carbon chain in 3-bromo-4-ethyl pentanoic acid is not according to IUPAC rule.

A. Both the statements are correct but Statement 2 is

not the correct explanation of Statement 1

B. Both the statements are correct but Statement 2 is

the correct explanation of Statement 1

C. Statement 1 is correct but Statement 2 is incorrect

D. Both the statements are incorrect

#### Answer: B



**4.** Statement-1: Homologous are having similar physical properties and different chemical properties.

Statement-2: They are having different molecular masses and having same F.G.

A. Both Statements are correct but Statement 2 is not

the correct explanation of Statement 1

B. Both Statements are correct and Statement 2 is the

correct explanation of Statement 1

- C. Statement 2 is correct but Statement 1 is incorrect
- D. Statement 1 is correct but Statement 2 is incorrect

## Answer: C



**5.** Statement-1: 3-Bromo-4-ethyl pentanoyl bromide is not the correct IUPAC name.

Statement-2: Selection of carbon chain in 3-bromo-4-ethyl pentanoyl bromide is not according to IUPAC rule.

A. Both the statements are correct but Statement 2 is

not the correct explanation of Statement 1

B. Both the statements are correct but Statement 2 is

the correct explanation of Statement 1

- C. Statement 1 is correct but Statement 2 is incorrect
- D. Both the statements are incorrect

Answer: A



**6.** Statement-1: Ethanol and propane-1-ol are homologous. Statement-2: They are differ in their molecular formula by  $CH_2$ .

A. Both Statements are correct but Statement 2 is not

the correct explanation of Statement 1

B. Both Statements are correct and Statement 2 is the

correct explanation of Statement 1

C. Statement 1 is correct but Statement 2 is incorrect

D. Statement 2 is correct but Statement 1 is incorrect

**Answer: B** 



**7.** Statement-1: In ethene both the carbon atoms are secondary.

Statement-2: Both the carbon atoms are bonded with double bond.

A. Both Statements are correct but Statement 2 is not

the correct explanation of Statement 1

B. Both Statements are correct and Statement 2 is the

correct explanation of Statement 1

C. Statement 1 is correct but Statement 2 is incorrect

D. Statement 2 is correct but Statement 1 is incorrect

Answer: D

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**8.** Statement-1: Pyridine is a tertiary amine.

Statement-2: in pyridine is attached with no hydrogen.

A. Both Statements are correct but Statement 2 is not

the correct explanation of Statement 1

B. Both Statements are correct and Statement 2 is the

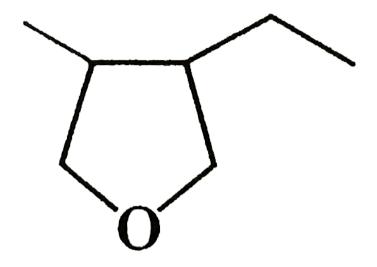
correct explanation of Statement 1

C. Statement 1 is correct but Statement 2 is incorrect

D. Statement 2 is correct but Statement 1 is incorrect

#### Answer: D

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#### IUPAC

name is 2-ethyl-3-methyl-1-,4-epoxy butane.

Statement-2: Substituents are written in alphabetic order.

A. Both Statements are correct but Statement 2 is not

the correct explanation of Statement 1

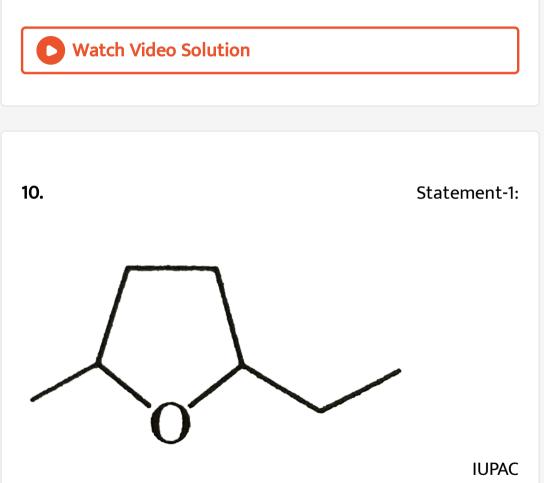
B. Both Statements are correct and Statement 2 is the

correct explanation of Statement 1

C. Statement 1 is correct but Statement 2 is incorrect

D. Statement 2 is correct but Statement 1 is incorrect

#### Answer:



name is 1,4-epocy-1-ethyl-4-methylbutane.

Statement-2: Substituents are written in alphabetic order.

A. Both the statements are correct but Statement 2 is

not the correct explanation of Statement 1

B. Both the statements are correct but Statement 2 is

the correct explanation of Statement 1

C. Statement 1 is correct but Statement 2 is incorrect

D. Both the statements are incorrect

Answer: D

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**Multiple Objective Type** 

1. Which of the following is primary amine?

A. t-butyl amine

B. Aniline

C. Sec-butylamine

D. N-methyl methanamine

# Answer: A::B::C

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2. Select incorrect IUPAC name(s).

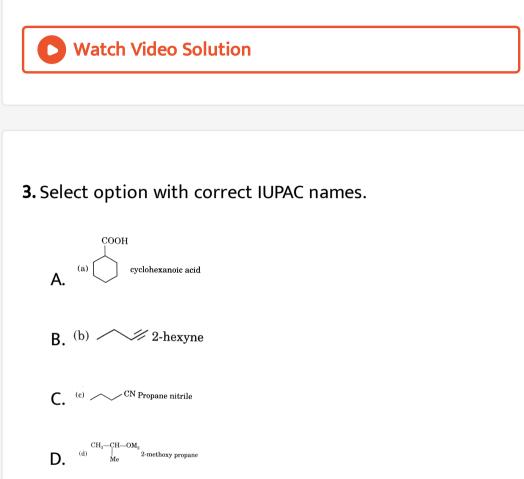
A. 1-amino pentane-1,4-dione

B. 3-chloro cyclohexanoic acid

C. Propane-1,3-dicarboxylic acid

D. 2,3-dimethyl cyclohex -1-ene

# Answer: A::B::C::D



#### Answer: B::D



4. Which of the following is/are organic compound(s)?

A.  $CH_3MgBr$ 

 $\mathsf{B.}\,PhNa$ 

C.  $CCI_4$ 

D. Urea

Answer: A::B::C::D

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5. Which of the following are homolgous ?

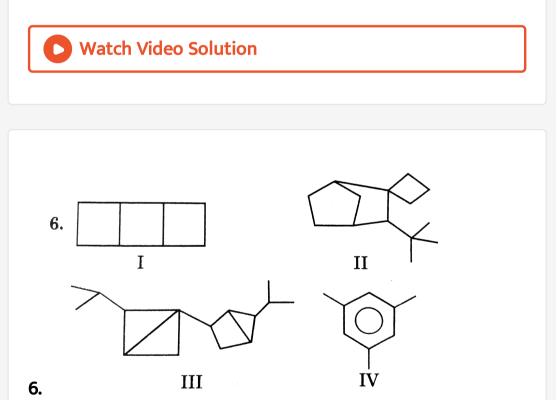
A.  $OH \qquad CH_2-OH$ 

B.  $CH_3 - NH_2$  and  $CH_3 - NH - CH_3$ 

C. 
$$CH_3-CH_2-CH_2-CH_2-NH_2$$
 and

$$CH_3-CH_2-NH_2$$
  
 $O \ ert$   $O \$ 

#### Answer: C::D



Find out the number of  $1^\circ, 2^\circ$  and  $3^\circ$  carbon atoms in the

above compound.

A. I is having four  $2^\circ$  and four  $3^\circ$  carbons

B. II is having three  $1^\circ,$  six  $2^\circ$  three  $3^\circ$  and two  $4^\circ$  carbons

C. III is having four  $1^\circ$  two  $2^\circ$ , eight  $3^\circ$  carbons and one

 $4^\circ$  carbon

D. IV is having three  $1^\circ$  , three  $2^\circ$  and three  $3^\circ$  carbons

Answer: A::B::C::D

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7. Which of the following is not traid of homogous series ?

A.  $CH_3NH_2$ ,  $(CH_3)_2NH$ ,  $(CH_3)_2N$ 

#### $Ph-PH, Ph-CH_2-OH, Ph-CH_2-CH_2-OH$

#### C. $HCOOH, CH_3COOH, CH_3COOCH_3$

D. None of the above

Answer: A::B::C

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8. Which of the following is/are incorrect IUPAC name.

A. 4-chloro-3-methyl cyclopentanol-1

B. 1-amino-3-bromo hexan-1-one

C. 4-chloro-3-methyl cyclohexane carboxylic acid

D. 3-bromo-1-methyl hexan-1-ol

#### Answer: A::B::D

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9. Neopentyl alcohol is:

A.  $1^\circ$  alcohol

B. $2^{\circ}$  alcohol

C.  $3^{\circ}$  alcohol

D. an ether

Answer: A

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10. Which of the following is/are not the correct IUPAC name

?

A. 2-Ethyl-3-methyl pentane

B. 4-Formyl pentane-2-ol

C. 3-Carbocy pentanoic acid

D. Cyclohexaonic acid

Answer: A::B::C::D

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11. Which of the following is/are incorrect IUPAC names ?

A. 2-Ethyl-3-methyl pentane

B. 1-Chloro-4-methyl pentane-1-ene

C. Spiro [3.4] octan-5-oic acid

D. 2,3-Dimethyl cyclohex-1-ene

#### Answer: A::B::C::D



**12.** Which of the following represent correct pair of homologous ?

#### B. MeOH and $MeCH_2CH_2OH$

C. (c) 
$$H-C-O-CH_3$$
 and  $CH_3-C-O-CH_3$ 

D. (d)  $CH_3CH_2$ —NH<sub>2</sub> and  $CH_3$ —CH<sub>2</sub>—N  $\overset{H}{\sim}_{CH_3}$ 

#### Answer: B::C

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13.  $C_n H_{2n-2}$  represents the homologous series of:

A. alkyne

B. diene

C. cycloalkene

D. spiroalkane

Answer: A::B::C::D

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14. Select correct IUPAC name:

A. methane-1,1,1,1,-tetra carboxylicacid

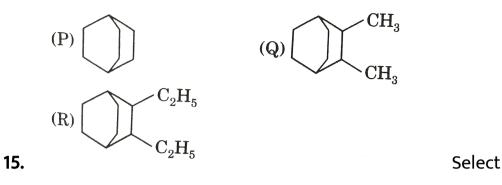
B. 5-carboxy-heptane-1,7-dioicacid

C. 2-chloro-ethanoyl chloride

D. 1-bromo-3-fluoro-4-methyl cyclohexane

Answer: A::C





the correct option.

A. P and Q are homologous of each other

B. Q and R are homologous of each other

C. R is next heigher homologous of P

D. R is next homologous of Q

Answer: A::B

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16. Which of the following statements is/are correct?

A. Oxalic acid is a dicarboxylic acid

- B. Functional group present in picric acid is -COOH.
- C. The IUPAC name of lactic acid is 2-hydroxy propanoic

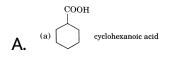
acid.

D. IUPAC name of acetyl acetone is pentane-2,4-dione.

#### Answer: A::C::D

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17. Select option with correct IUPAC names.



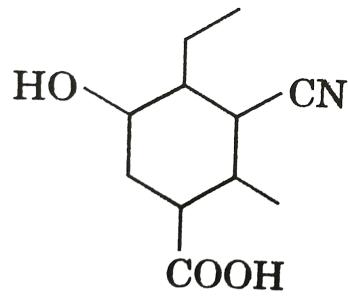


C. (c)  $\sim$  CN propane nitrile

### D. $CH_3 - CH - OMe$ 2-methoxy propane $ert_{CH_3}$

#### Answer: B::D





#### 18.

Select correct statement.

A. It is a homocyclic compound

B. It is having -COOH as the principal functional group

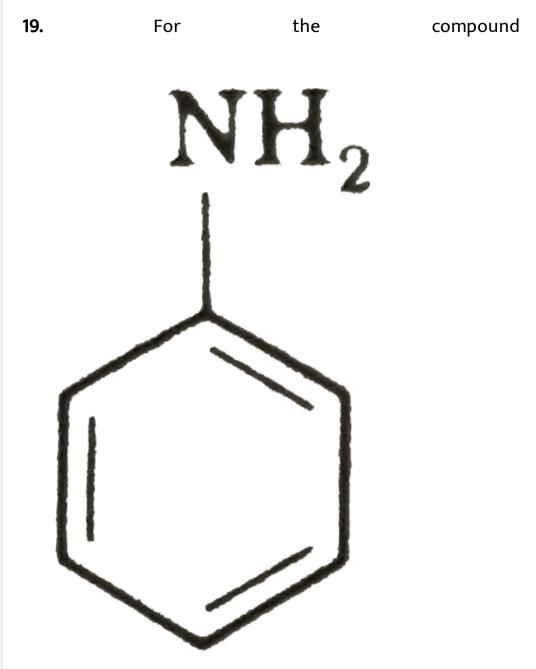
C. It is having isocyanide as one of the functional group

D. It is having ethyl at 2nd position

#### Answer: A::B







select the

incorrect statement.

A. Compound is homocyclic hydrocarbon

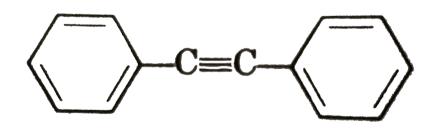
B. Number of  $\sigma$  bonds are 8

C. Degree of unsaturation of the compound is 3

D. It is a heterocyclic compound

#### Answer: A::B::C::D

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#### 20.

compound has:

A.  $8\pi$  bond

B. degree of unsaturation is 10

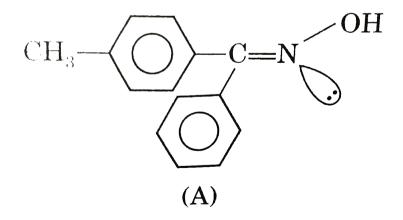
C.  $3^{\circ}$  hydrogen

D. four  $3^\circ$  carbon

Answer: A::B

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21. Correct statement about given ketoxime is:



A. (A) is named as syn-p-tolylphenyl ketoxime

B. (A) is named as anti-phenyl-p-tolyl ketoxime

C. Compound (A) is Z isomer

D. Compound (A) is E isomer

Answer: A::B::C



22. Which of the following IUPAC names (s) is/are correct?

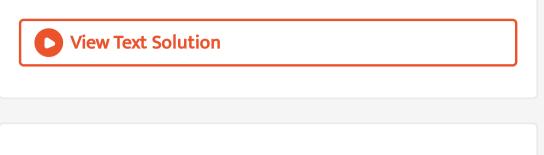
A. 2,2,3-Trimethyl hexane

B. 3-[1,2-Dimethy Propyl]-5-Propyl Decane

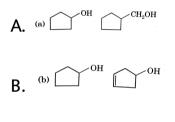
C. 3,4 Dimethyl-7-(2 methyl propyl) Undecane

D. 3-Ethyl-2,6-Dimethyl heptane

#### Answer: A::C::D



#### 23. Which of the following pairs is/are homologous ?



C.

 $CH_3 - CH_2 - CH_2 - CH_2 - OH, CH_3 - CH_2 - OH$ 

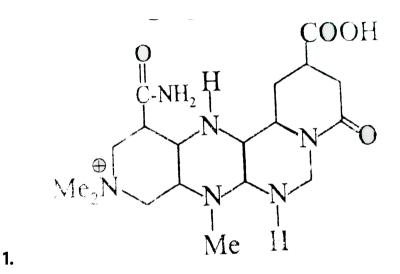
D.

$$CH_2-CH_2-CH_2-OH, CH_3-CH-CH_2-CH_3 ert_{OH}$$

#### Answer: A::C::D



#### **Comprehension 1**



How many different type of functional groups are present in given compound.

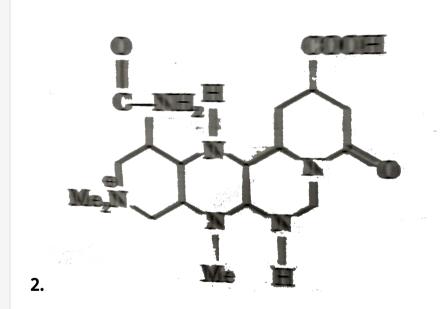
A. 6

B. 5

C. 4

#### Answer: A





Degree of unsaturation of this compound is:

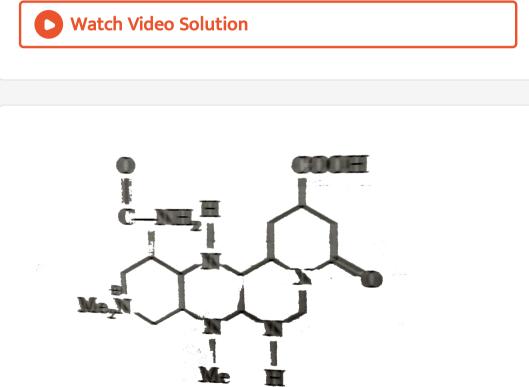
A. 10

B. 9

C. 8

D. 7

Answer: D



3.

Number of  $2^\circ$  nitrogens present is given compound

B. 3

C. 4

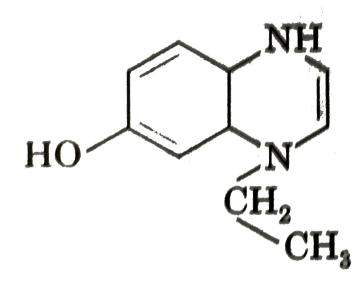
D. 5

Answer: A



Comprehension 2

**1.** For the given compound answers the following questions:



The number of  $3^\circ$  carbon present in compound is:

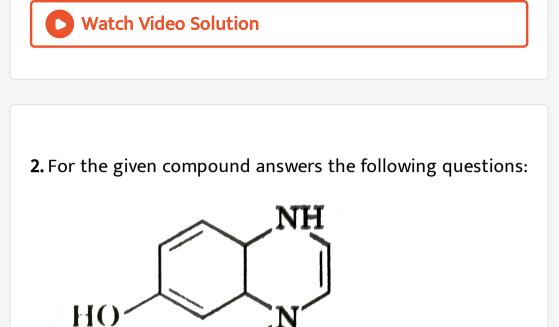
A. 0

B. 1

C. 2

D. 3

Answer: A



 $CH_3$ 

The degree of unsaturation is:

A. 2

B.4

C. 5

D. 3

## Answer: C Watch Video Solution 3. For the given compound answers the following questions: HC H,

The number of functional group present are (Excluding C=C bonds):

B. 3

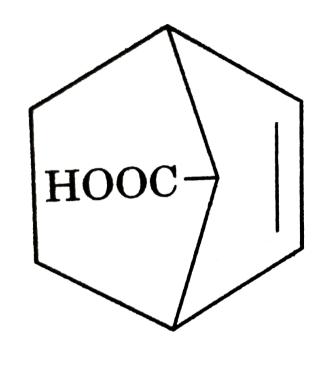
C. 4

D. 5

Answer: B



Comprehension 3



#### Degree of unsaturation of this compound is:

A. 2

1.

B. 3

C. 4

D. 5

Answer: C



Position of -COOH in IUPAC name of this compound is:

A. 1

B. 2

C. 6

D. 7

# Answer: D Watch Video Solution HOOC 3.

Suffix of this compound in its correct IUPAC name is:

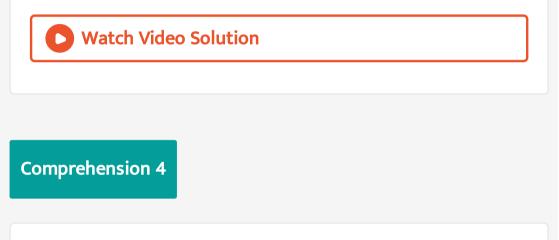
A. enoic acid

B. enecarboxylic acid

C. enyloic acid

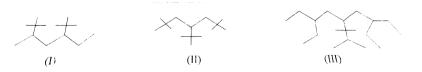
D. ene

Answer: B



1. Observe the following compounds answer the following

question



Which one of three compounds contains maximum number of carbon atoms in its principal carbon chain ?

A. I

B. II

C. III

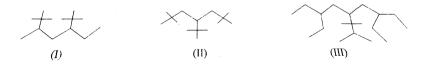
D. Equal in I and III

Answer: C

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2. Observe the following compounds answer the following

question



Which one of these three compounds contains maximum number of side chains in its principal carbon chain ?

A. I

B. II

C. III

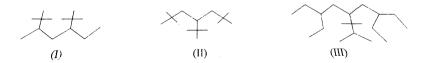
D. Equal in I and II

Answer: A

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3. Observe the following compounds answer the following

question



Which one of these three compounds contains maximum number of quarternary carbon atoms  $(4^\circ)$  ?

A. I

B. II

C. II

D. Equal in II and III

Answer: B

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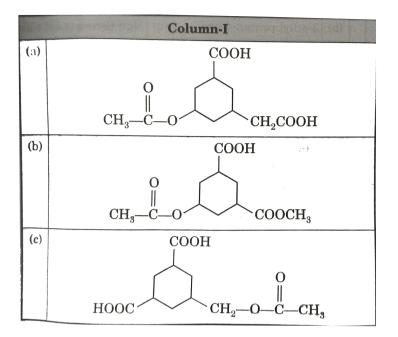
Match The Column Type

#### **1.** Match the following columns:

Column-I			Column-II	
(a)	Isobutane	(p)	Contains 1° carbon atoms	
(b)	Neohexane	(q)	Contains 2° carbon atoms	
(c)	Isooctane	(r)	Contains 3° carbon atoms	
(d)	Isodecane	(s)	Contains 4° carbon atoms	
100	Column II	(t)	Parent carbon chain contains odd number of carbon atoms in IUPAC	

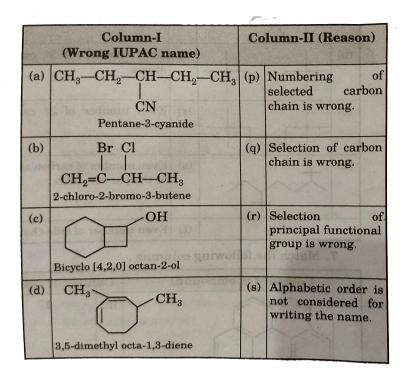
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#### 2. Match the following columns:



Column-II				
(p)	5-(Ethanoyloxymethyl) cyclohexane-1,3-dicarboxylic acid			
(q)	Methyl 1-(3,5-dicarboxy cyclohexyl) methanoate			
(r)	3-(Carboxymethyl)-5-ethanoyloxy cyclohexane carboxylic acid			
(s)	3-Ethanoyloxy-5-methoxycarbonyl cyclohexane carboxylic acid			



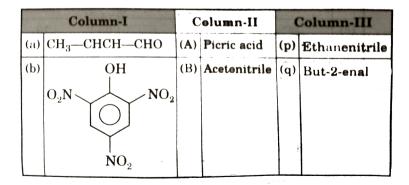


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	Column-I	Column-II (DOU)		
(a)	Azulene	(p)	4	
(b)	Napthalene	(q)	5	
(c)	Tetraline	(r)	6	
(d)	1,2,3,-tricyclo propylcyclo propane	(s)	7	



### 5. Match the following columns:

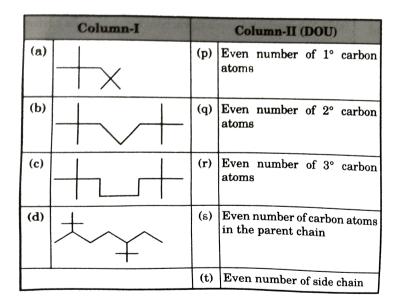


(c)	CH <sub>3</sub> CN		Crotonal- dehyde		2,4,6-Trinitro phenol
(d)	CHCl—CCl <sub>2</sub>	(D)	Westro sol	(s)	Trichloro- ethene

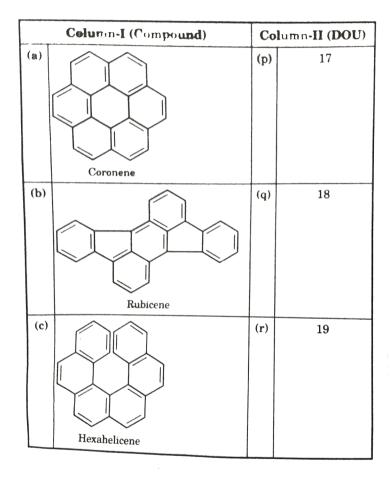


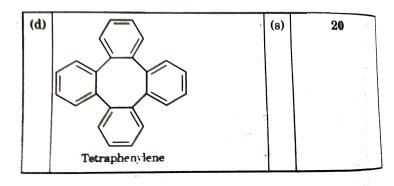
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### 6. Match the following columns:



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Column-I		Column-II				
(a)	$\wedge \wedge$	(p)	Homocyclic hydrocarbon			
(b)	Ô	(q)	Homocyclic compound			
(c)	<>=0	(r)	Heterocyclic compound			
(d)	$\langle \rangle$	(s)	Aliphatic hydrocarbon			
	amots Do	(t)	Compound contains $\pi$ -electrons			

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Column-I			Column-II		
(a)	3-chloro-2-bromo-4-ethyl pentanal	(p)	Selection of parent carbon chain is not according to rule		
(b)	3-ethyl pentan-4-one	(q)	Numbering is not correct		
(c)	3-oxo pentanoic acid	(r)	Name is not written in alphabetical order		
(d)	Pent-4-en-1-yne	(s)	It is a correct name		



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# 10. Match the following columns:

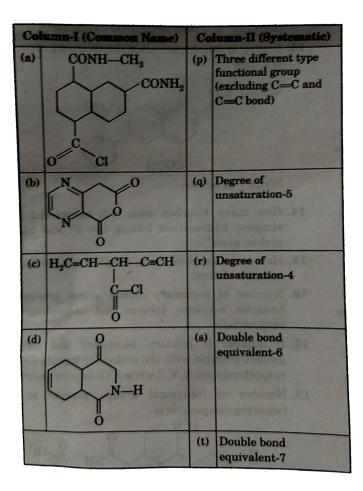
Column-I (Common Name)		Column-II (Systematic	
(a)	Cinnamic acid	(p)	2-oxo propanoic acid
(b)	Anisole	(q)	Methoxy benzene
(c)	Pyruvic acid	(r)	Ethane 1, 2-dioic acid
(d)	Oxalic acid	(s)	3-phenyl prop-2-enoic acid



Column-I (Common Name)		-	Column-II (Systematic)		
(a)	Succinic acid	(p)	Propane-1, 2, 3 - triol		

(b)	Glycerol	(q)	1,1,2-trichloroethene
(c)	Westrosol	(r)	Butane-1,4-dioic acid
		(s)	$sp^2$ carbon is present







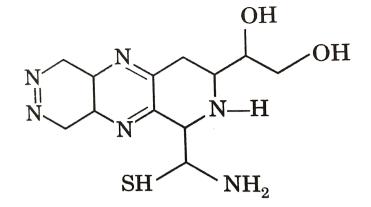
Subjective Type

**1.** How many alkyl groups are possible for iso-octane?

<b>Vatch Video Solution</b>						
<b>2.</b> Total number of $1^\circ$ and $3^\circ$ alcohols po $C_4 H_{11} OH.$	ossible for					

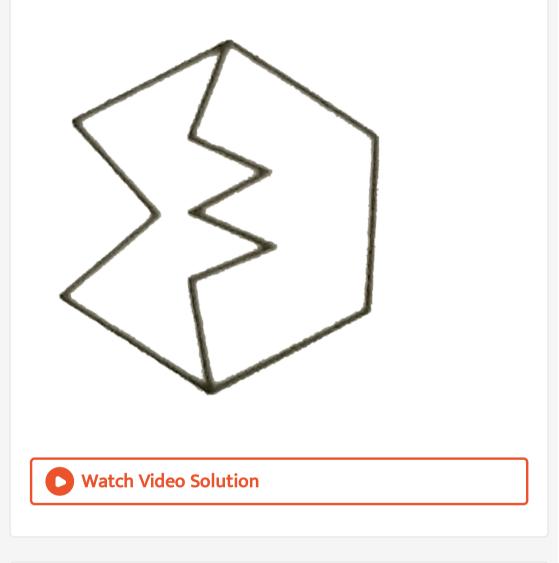
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**3.** Total number of different functional groups in following compound :

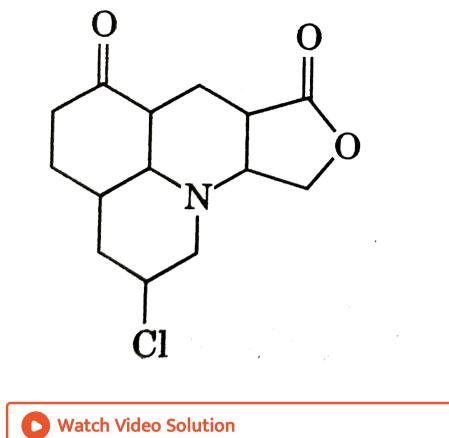


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**4.** The IUPAC name of the following compound is bicyclo [x,y,z] dodecane. What is the value of x,y and z?

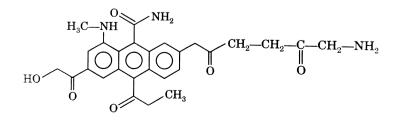


**5.** Total number of functional groups present in following compound:



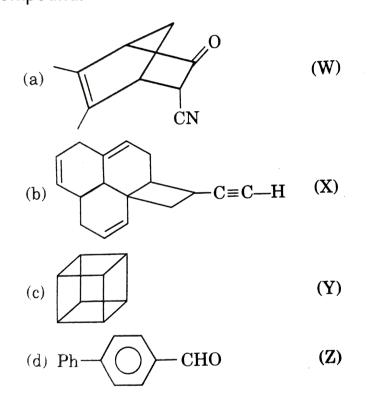
### 6. How many different type of functional groups are present

in following structure ?(Excluding C = C)

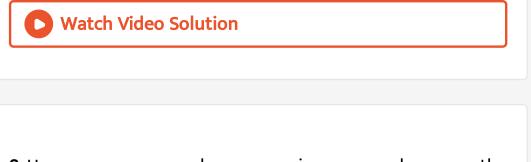




**7.** Write D.B.E (Double bond equivalent) for the following compound:

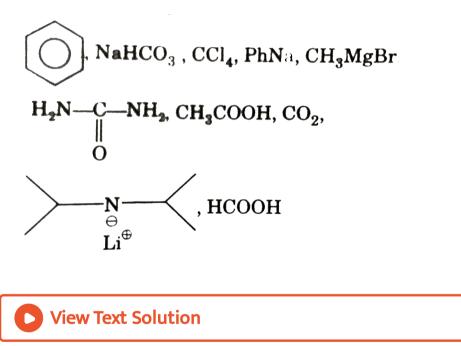


[Write answer of part (a),(b),(c) and (d) in the same order and present the four digit number as answer in OMR sheet. For example.]

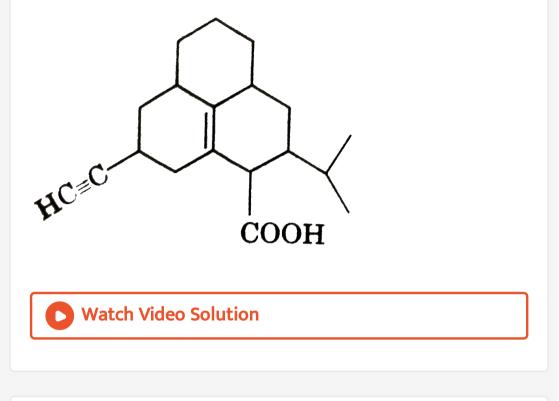


8. How many compounds are organic compounds among the

compounds given below?

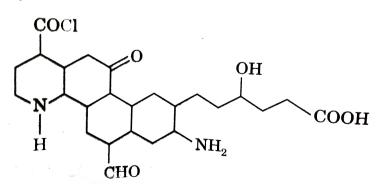


**9.** Total number of  $3^{\circ}$  carbon atoms present in compound given below:

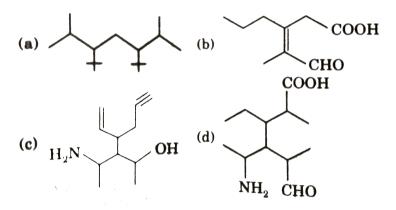


10. How many functional groups are present in the given

compound ?

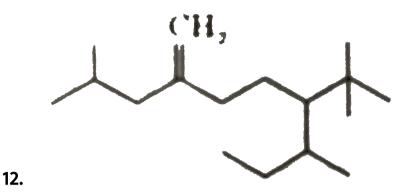


**11.** Find out number of C-atoms present in principal chain according to IUPAC rules.

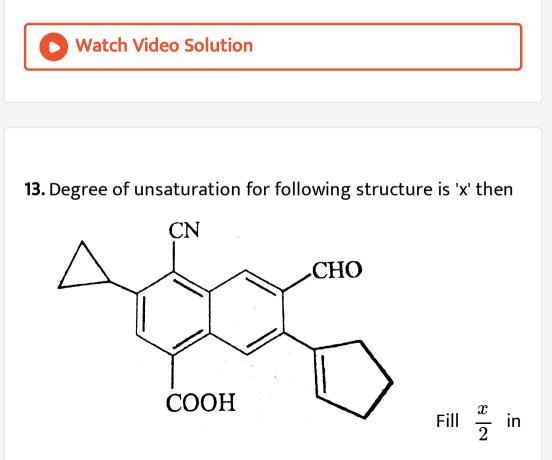


[Write answer of part (a),(b),(c) and (d) in the same order and present the four digit number as answer in OMR sheet. For example.]

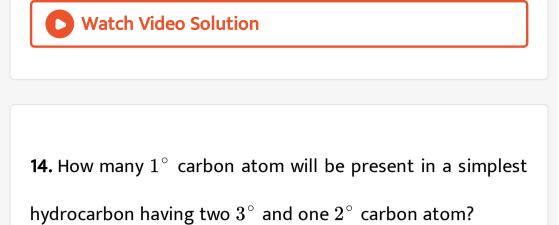




Number of carbon atoms in parent 'C' chain



OMR sheet



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15. How many carbons are in simplest alkyne having two side

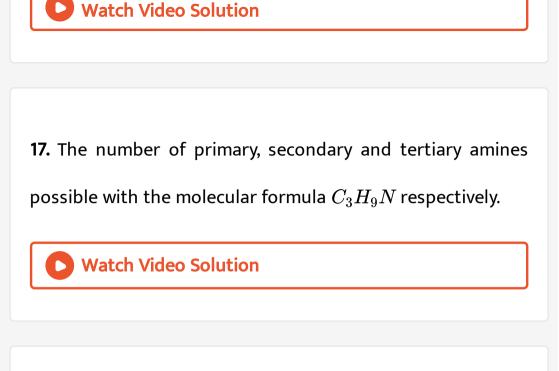
chanis ?

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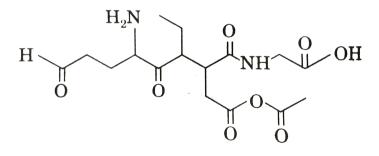
16. Number of secondary carbon atoms present in benzene,

o-xylene, touene and mesitylene are respectively:



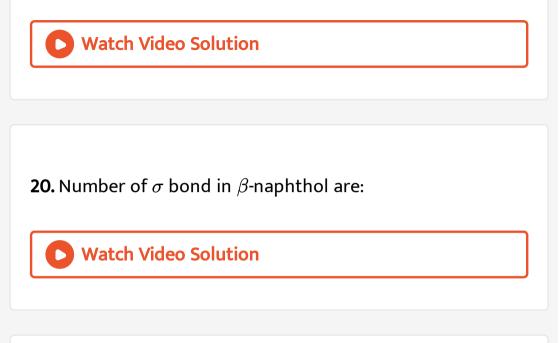


**18.** Number of functional groups present in the following compounds is:





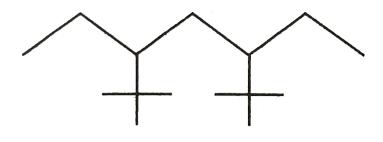
19. What is the degree of unsaturation of cubane?



21. How many linear dienes are there with molecular formula

 $C_6H_{10}$ ? (Ignore cis-trans isomers)





22.

(a) Number of carbon atoms in the principal carbon chain

(b) Number of side chain

(c) Number of methyl substituent in the principal carbon chain

(d) Number of ethyl substitute in principal carbon chain

[Write answer of part (a),(b),(c) & (d) in the same order and

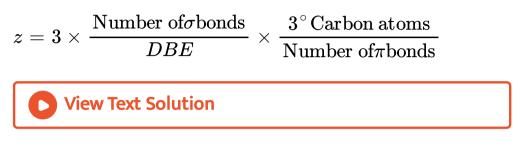
present the four digit number as answer.]



23. Calculate the value of z:



where



24. (a) 3,6,-Bis-(1,1-dimetylethyl) octane

- (b) Octa-4,7-dien-2-amine
- (c) 3-Hydroxymethyl cyclohexanecarboxylicacid
- (d) 2-Nitropent-3-ene
- If the given IUPAC name is correct the write 1 and if it is

wrong then write 2

