



Insecticides and Toxins 313 chm

(ورقة إمتحانيه كامله)

الزمن: ساعتان

الإجابة النموذجية لامتحان المبيدات والسموم ٣١٣ ك

الفرقة : الثالثه

مجموعه: 2

الشعبة : الكيمياء

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قسم : الكيمياء

كلية : العلوم

Choose the correct answer:

(80x1= 80 Mark)

1-Which of the following insecticides converted to highly toxic compounds than the original?

- a- systemic b- fumigant c-contact d-protective

2-Neem is an example of insecticides.

- a- natural b- synthetic c-inorganic d-none of them

3-Insecticides are known by stomach poisons are

- a- contact b- protective c- inhalation d- all of them

4- Parathion is an example of insecticides.

- a- protective b- contact c- systemic d- none of them

5- In the body, the wood alcohol undergoes metabolic oxidation to

- a- formaldehyde b- formic acid c- acetaldehyde d- (a)&(b)

6-The fetal dose of phenol absorbed by

- a- inhalation b- skin c- contact d- (b)&(c)

7-The metabolic oxidation of ethanol is methanol.

- a- faster than b- slower than c- equal to d- not observed

8-..... insecticides, which penetrate through the skin.

- a- protective b- direct c- inhalation d- fumigant

9-..... insecticides, which applied of a pest control in the gaseous state.

- a- fumigant b- stomach c- contact d- protective

10- insecticides are obtained from natural sources.

- a- natural b- synthetic c- semi-synthetic d- none of them

11- DDT is an example of insecticides.

- a- chlorniated b- organophosphate c- carbamates d- organo-sulphur

12- insecticides, which kill by contact.

- a- protective b- direct c- stomach d- fumigant

13- The fetal dose from wood alcohol for human is believed to lie between g.

- a- 25-75 b- 50-100 c- 50-150 d- 50-250

14- Most individuals are clinically intoxicated at a level of % blood alcohol.

- a- 0.3 to 0.5 b- 0.15 to 0.3 c- at 0.5 d- above 0.5

- 15- Ethylene oxide and propylene oxide are compounds.
a- carcinogenic b- teratogens c- useful d- all of them
- 16- The toxicity of carboxylic acids increased by increasing the number of
a- carboxylic groups b- π -bonds c- σ -bonds d- (a)&(b)
- 17- The fetal dose of ether absorbed by inhalation due to it's
a- viscosity b- melting point c- volatility d- boiling point
- 18- Human may suffer acidemia after exposure to ethylene glycol due to the formation of intermediate....
a- glycolic acid b- calcium oxalate c- glyoxylic acid d- none of them
- 19- The fetal dose for human from ethylene glycol was estimated to be about g.
a- 35 b- 50 c- 110 d- 75
- 20- Benzenehexachloride exists in isomers.
a- six b- three c- four d- five
- 21- Kidneys are harmed because of the deposition of solid after exposure to ethylene glycol.
a- glycolic acid b- calcium oxalate c- glyoxylic acid d- oxalic acid
- 22- Only isomer of hexachlorocyclohexane has insecticidal properties.
a- alpha b- gamma c- beta d- none of them
- 23- DDT is rapidly decomposed to the biologically inactive compounds by the action of
a- higher temperatures b- lower temperatures c- strong ultraviolet light d- (a)&(c)
- 24- Methoxy chlor is prepared by condensation of anisole with
a- trichloroacetaldehyde b- dichloroacetaldehyde c- monochloroacetaldehyde d- none of them
- 25- Perthane was prepared by condensation of dichloroacetaldehyde with
a- methyl benzene b- ethyl benzene c- chlorobenzene d- fluorobenzene
- 26- DDT the balance of Na^+ and K^+ ions within the axons of the neuron in insect.
a- destroys b- activates c- increases d- (b)&(c)
- 27- Which of the following groups increasing the efficiency of DDT if they substituted at benzene ring?
a- OH b- NH_2 c- Br d- all of them
- 28- The toxicity of *o,p'*-DDT is considerably *p,p'*-DDT towards insects.
a- more than b- less than c- higher than d- (a)&(c)
- 29- Synergists are not in themselves toxic but are materials used to the activity of insecticides.
a- increase b- decrease c- enhance d- (a)&(c)
- 30- DDT exists in isomers.
a- two b- four c- three d- five
- 31- The toxicity of DDD is DDT.
a- higher than b- less than c- more than d- equal to
- 32- Condensation reaction of monochlorobenzene with dichloroacetaldehyde yields
a- DDD b- DDT c- DDE d- DFDT
- 33- The group responsible for the action of synergists is
a- methylene dioxy phenyl b- polyethylene glycol chain c- OH d- none of them
- 34- Gammexane is
a- hexachlorocyclohexane b- benzenehexachloride c- polychloroterpenes d- (a)&(b)
- 35- The insecticide efficiency of DDT if the chlorine atoms exchanged by fluorine atoms.
a- increased b- enhanced c- decreased d- all of them
- 36- The action of synergists is based on the oxidase responsible for the oxidation decomposition of insecticides.
a- inhibition b- activation c- growth d- all of them
- 37- Synergists-enzyme complex breaks up into enzyme, formic acid and derivative.
a- catechol b- resorcinol c- quinol d- none of them
- 38- Tropital was prepared by reaction of diethylene glycol monobutyl ether with
a- piperonal dichloride b- sesamol c- piperonyl chloride d- methylene dioxybenzoic acid

- 39- Bucaprolate was prepared by reaction of diethylene glycol monobutyl ether with
- a- methylene dioxybenzoic acid b- piperonal dichloride
c- methyl chloro dihydrosafrol d- sesamol
- 40- Sesamex was prepared by reaction of vinyl ethyl diethylene glycol with
- a- methylene dioxybenzoic acid b- methylene dioxyphenol
c- methyl chloro dihydrosafrol d- none of them
- 41- Which of the following is a simple asphyxiant?
- a- aniline b- hexane c- cyclohexane d- methane
- 42- A mixture of soap, water, and..... can be used as an insecticide for citrus trees
- a- gasoline b- kerosene c- diesel d- benzene
- 43- Phytotoxic means.....
- a- toxic to plants b- toxic to human c- toxic to animals d- all of them
- 44- What is the toxicity rating "4" refer to?
- a- slightly toxic b- very toxic c- extremely toxic d- moderately toxic
- 45- Some insecticides are degraded to amine, what is the effect of amines on human?
- a- increase the pH b- corrosive to tissues c- simple asphyxiant d- a & b
- 46- Which of the following is incorrect on Methemoglobin?
- a- caused by oxidation of ferrous to ferric b- caused by nitro and amino compounds
c- methylene blue can recover it d- oxygen therapy helps in recovering
- 47- Mothball is made of.....
- a- naphthalene b- anthracene c- benzene d- mixture of all of them
- 48- The mode of action "toxicity mechanism" of carbamate insecticide isof AChE
- a- production b- activation c- inhibition d- decomposition
- 49- Which of the following insecticides is not anticholinesterase?
- a- paraoxon b- DDT c- carbofuran d- parathion
- 50- What is the toxicity rating of hexane?
- a- 2 b- 3 c- 4 d- 5
- 51- What is the structure of acetylcholine? $(\text{CH}_3)_3\text{N}^+\text{CH}_2\text{CH}_2\text{R}$, where R=...
- a- $-\text{OCOMe}$ b- $-\text{COOMe}$ c- $-\text{CH}_2\text{OCOMe}$ d- $-\text{CH}_2\text{COOMe}$
- 52- What is the trade name "Sevin" refers to?
- a- methiocarb b- carbofuran c- DDT d- carbaryl
- 53- Carbamate insecticide possessing sulfur substituent exhibits high efficiency due to...
- a- the strong attachment of d-orbital of sulfur to AChE b- increasing the solubility
c- the size of sulfur atom d- increasing the polarity
- 54- Which of the following groups increasing the aryl carbamate efficiency in *ortho* position?
- a- NH_2 b- OCH_3 c- CH_3 d- CHO
- 55- Which of the following groups increasing the aryl carbamate efficiency in *meta* position?
- a- NH_2 b- OCH_3 c- CH_3 d- CHO
- 56- Which of the following insecticides are persistent "less degradable"?
- a- carbaryl b- pirimicarb c- carbofuran d- aldicarb
- 57- Carbaryl results from the reaction of 1-naphthol with.....
- a- CH_3NHCOCI b- CH_3NCO c- $\text{COCl}_2/\text{CH}_3\text{NH}_2$ d- all are possible
- 58- Pirimicarb synthesizes from reaction of ethyl 2-methyl acetoacetate and
- a- guanidine b- N-methyl guanidine c- N,N-dimethyl guanidine d- none of them
- 59- Electron-withdrawing group substituents (e.g. NO_2) are not required in aryl carbamate insecticide?
- a- it will hydrolysis fast before reaching AChE b- it will not hydrolysis by AChE
c- can't synthesize easily d- a and c
- 60- In the esteratic site of AChE, the alcohol that responsible on hydrolysis of the carbamate is....
- a- 1° alcohol b- 2° alcohol c- 3° alcohol d- mixture of the three types

- 61-The carbaryl-AChE complex is generated by formation of.....
 a- ionic force b-coulomb force c-electrostatic force **d- π - π interaction**
- 62-Which of the following statements is correct on Propoxur?
 a- Baygon is trade name b-household pest control c-LD₅₀ is 50 **d- all of them**
- 63-Propoxur shows lower insecticide efficiency than carbofuran due toreason
a- flexibility of the side group b-hydrophobicity c-penetrating d- all of them
- 64-Why cyclohexyl N-methylcarbamate is not a proper insecticide?
 a- expensive b-hard to synthesis **c-not attracted to AChE** d-very toxic
- 65-Which part in carbaryl is attracting to the AChE?
 a- CO group b- N atom **c- naphthyl group** d-methyl group
- 66-Synthesis of aldicarb, reaction of 2-methylpropene with followed by CH₃SNa then CH₃NCO
a-NOCl b-NaOCl c-HOCl d-CH₃OCl
- 67-What is LD₅₀ of aldicarb (rats) in mg/kg?
a- ~0.93 b- ~9.30 c- ~930 d- ~93.0
- 68-Which of the following is stronger anticholinesterase insecticide?
a- CH₃S-C(CH₃)₂CH=N-O-CO-NHCH₃ b- CH₃S-CH(CH₃)CH=N-O-CO-NHCH₃
 c- CH₃S-CH₂-CH=N-O-CO-NHCH₃ d- They are all same
- 69-What is the pre-harvest interval (PHI) of carbaryl?
 a- two weeks b- only one day c- three weeks **d- 7 days**
- 70-What is the metabolic activation product of the aldicarb ?
 a-aldicarb-sulfone b-aldicarb-sulfoxide **c-both a and b** d-none of them
- 71-What is the systemic effect of an insecticide mean?
 a- affects immune system b- group of insecticide are prohibited
c- absorbed by plants and translocate d- all of them
- 72-In carbofuran synthesis, O-nitrophenol reacts with, followed by heating and then conversion the nitro to hydroxyl group
a- 3-chloro-2-methylpropene b- 3-chloro-2-methylpropane
 c- 3-chlorobut-1-ene d- 3-chlorobut-2-ene
- 73-In synthesis of paraoxon, sodium p-nitrophenolate reacts with.....
a- diethyl phosphorochloridate b- dimethyl phosphorochloridate
 c- ethyl phosphorodichloridate d- methyl phosphorodichloridate
- 74-In synthesis of demeton-O, reacts with ethylene oxide followed by adding (C₂H₅O)₂^SP-Cl
 a- methyl mercaptan **b- ethyl mercaptan** c- ethyl alcohol d- methyl alcohol
- 75-Parathion isthan paraoxon
a-less toxic b- higher toxic c-more hydrolysable d- b and c
- 76-Parathion-methyl isthan parathion
 a- less toxic b- higher toxic c-more hydrolysable **d- a and c**
- 77-Which compound has longer time (t_{1/2}) before regenerate the enzyme?
 a- AChE-O-P(O)(OCH₃)₂ c- AChE-O-C(=O)-NHCH₃ d- all are the same
- 78-Which of the following insecticide can't undergo thio-thiono isomerization?
a- paraoxon b- parathion c- parathion-methyl d- demeton-O
- 79-What is the LD₅₀ of fenthion (rats) in mg/kg?
 a- 818 b- 515 c- 616 **d- 313**
- 80-What happen if the nitro group of paraoxon replaced with CH₃ group?
a- decreasing the toxicity b- decreasing hydrolysis stability
 c- increasing the toxicity d- no change will happen

Best Wishes

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