

## QUESTION BANK (PHARMACOLOGY)

### Paper No-1 (CNS)

#### Name the following

1. Most important alkaloid present in Coffee seeds. (Caffeine)
2. Important alkaloid present in Tea leaves. (Theophylline)
3. Most abundant alkaloid present in Cocoa seeds. (Theobromine)
4. 1,3,7 Trimethyl xanthine. (Caffeine)
5. 1,3 Dimethyl xanthine. (Theophylline)
6. 3,7 Dimethyl xanthine. (Theobromine)
7. Divine food. (Theobromine) (*Theobroma cacao*)
8. Divine leaf. (Tea leaf)
9. Native place of coffee. (Kaffa in Ethiopia)
10. Xanthine alkaloids with CNS stimulant action. (Caffeine, Theophylline, Theobromine)
11. Two chronobiotics. (Theophylline, Pentobarbitone)
12. One drug used to test Morphine addict. (Nalorphine)
13. Chemicals used to synthesize barbituric acid. (Urea & Malonic acid)
14. Few sources of caffeine. (Coffee seeds, Guarana, Cola nuts)
15. Botanical name of Tea plant. (*Thea sinensis*)
16. Scientific name of Cocoa plant. (*Theobroma cacao*)
17. Plant from which Ephedrine is obtained. (*Ephedra senica*)
18. Plant from which theobromine is obtained. (*Theobroma cacao*)
19. Chinese name of plant from which ephedrine is obtained. (Mahuang)
20. Botanical name of Mahuang plant. (*Ephedra senica*)
21. The most specific antagonist of Morphine. (Naloxone)
22. The antagonist of Droperidol + Fentanyl. (4 Aminopyridine + Naloxone)
23. The antagonist of Xylazine + Ketamine. (4 Aminopyridine + Yohimbine)
24. Antagonist of Xylazine sedation in cattle. (4 Aminopyridine + Doxapram)
25. A CNS depressant gas which will stimulate respiration in small doses. (Carbon dioxide)
26. Solidified Carbon dioxide. (Dry ice)
27. Two reflex medullary stimulants. (Ammonium carbonate, Aromatic spirit of ammonia)
28. One reflex medullary stimulant alkaloid. (Lobeline)
29. Alkaloids present in *Strychnos nuxvomica*. (Strychnine, Brucine, Strychnicine, Vomisine)
30. The reflex we look for to judge the depth of pentobarbitone anesthesia. (Pedal)
31. The mediator of Renshaw cells. (Glycine)
32. One cerebral activator. (Piracetam, piratam).
33. One GABA derivative drug enhances learning and memory. (Piracetam)
34. One drug used in attention deficiency disorders. (Piracetam)
35. A glycoside which will stimulate micro circulation in brain. (Gincobiloba)
36. Two MAO-A inhibitors. (Clorgiline, Meclobemide)
37. One MAO-B inhibitor. (Selegiline)
38. Two Tricyclic antidepressants. (Imipramine, Amitriptyline)
39. Two Tetracyclic antidepressants. (Mianserine, Maprotiline)
40. Two Atypical antidepressants. (Trazodone, Fluoxetine)
41. Two CNS stimulants which inhibit Dopamine uptake, without any antidepressant effect. (Cocaine, Amphetamine)
42. One mood stabilizer of metallic origin. (Lithium carbonate)

43. Two Calcium channel blockers with mood stabilizing effect. (Sodium valproate, Carbamazepine)
44. Two classes of antidepressants . (MAO inhibitors, Tricyclic and related compounds)
45. The deepest degree of CNS sedation which can reverse back to normal.( Anesthesia)
46. The deepest degree of CNS sedation which we can achieve.(Paralysis and death)
47. One anodyne hypnotic . ( Opium)
48. One urea derivative hypnotic .(Phenobarbitone sodium)
49. A barbiturate derivative used to anesthetize fish . (Amobarbitone)
50. Two major inhalant anesthetics . (Halothane , Isoflurane)
51. One hypnotic under propane diol derivatives. ( Meprobamate)
52. One hypnotic under tertiary carbimol group. (Ethinamate)
53. Two minor inhalant anesthetics .(Methoxyflurane, Enflurane, Nitrous oxide.
54. Anesthetic agent of historical interest.(Chloroform, Cyclopropane)
55. Stage I of inhalant anesthesia .(Stage of analgesia, stage of excitement)
56. Two chronobiotics .(Theophylline , Pentobarbitone)
57. One agent used to test morphine addict .(Nalorphine)
58. A partial agonist of Morphine . (Nalorphine)
59. First sense which disappear with local anesthetic .(Pain)
60. One quinazalone hypnotic . (Methaquilone)
61. One piperinedione hypnotic . (Glutethamide)
62. One alcohol used as hypnotic agent . (Ethyl alcohol)
63. Drug used in “antabuse therapy” .(Disulphiram ,Tetra ethyl thiuram)
64. An anesthetic agent used in lab.animals, possessing bone marrow suppressant action. (Urethane)
65. Two agents which produce anesthesia by marked CNS stimulation. ( Ketamine, Enflurane. Nitrous oxide)
66. One alpha -2 adrenergic agonist used as pre anesthetic agent . (Xylazine)
67. Two species of animals which are stimulated by Opium (Horse, Cats)
68. One species of animal which are depressed by Opium . ( Dogs)
69. Two sympatho lytics used as pre anesthetic agent. (Atropine, Glycopyrolate)
70. One parasympatholytic alkaloid used as pre anesthetic agent .(Atropine)
71. The metabolic products of Halothane. (Trifluoroacetic acid, Bromide, Inorganic chloride)
72. Active ingredient of ETHRANE. (Enflurane)
73. Laughing gas. ( Nitrous oxide)
74. One inhalant anesthetic agent not metabolized by animal tissue. (Nitrous oxide)
75. Active ingredient of MSS 222. (Tricaine methane sulphonate)
76. One GABA antagonist. (Bicucullin)
77. One GABA synthesis inhibitor.(Thiosemicarbazide)
78. Name the ingredients of Triple bromide. (Sodium bromide. Potassium bromide and Ammonium bromide)
79. An anesthetic agent not metabolized by body. (Nitrous oxide)
80. A reflex medullary stimulant alkaloid. (Lobeline)
81. Chemicals used to synthesis barbituric acid. (Melonic acid and urea)
82. Diacetyl morphine. (Heroin)
83. One tranquilizer having hypothermic action. (Chlorpromazine)

**Fill up the blanks with most appropriate words:**

1. 1,3,7 Trimethyl xanthine is known as .....(Caffeine)
2. Xanthines are .....derivatives. (Purines)
3. The meaning of the word “xanthos” is .....(Yellow)

4. Strychnine is an example for .....stimulant (Spinal cord)
5. Dexedrine contain..... (Dexamphetamine)
6. Di acetyl morphine is otherwise known as . (Heroin)
7. The specific posture in strychnine poisoning is .....(Opisthotonus)
8. Codeine is a ..... group of alkaloid in opium. (phenanthrene)
9. Centers in medulla stimulated by Morphine .....are. (Oculomotor, Vomiting, vagal)
10. Coffee seeds contain .....% caffeine (1%)
11. In hyperacidity, among methyl xanthine beverages.....is preferred.(Tea)
12. Theophylline potentiate the action of.....diuretics. (Mercurials)
13. Among xanthines .....is more effective in relaxing bronchi (Theophylline)
14. Methyl xanthine blocks the .....receptors ,which is a neuro modulator in the Brain. (Adenosine)
15. Cocoa seeds mainly contain.....alkaloid. (Theobromine)
16. The reflex vagal stimulation can be blocked by . (Atropine)
17. Ether is decomposed to .....and .....(Ether peroxide and Acetaldehyde)
18. Antiasthmatic action of Theophylline is by inhibiting .....enzyme thereby increasing the c GMP level.(Phosphodiesterase)
19. As a broncho dilator among xanthines .....is preferred. (Theophylline)
20. As a CNS stimulant among xanthines .....is preferred. (Caffeine)
21. As a long duration diuretic among xanthines .....is preferred . (Theobromine)
22. To relieve fatigue .....is preferred among xanthines. (Caffeine)
23. Repeated administration of ephedrine causes the development of a phenomenon called .....(achyphylaxic)
24. Nicotine is obtained from.....(*Nicotiana tabaccum*)
25. Ephedrine is obtained from the .....plant in China .(Mahuang)
26. Procethamide is a mixture of .....and.....used to stimulate respiration in new bourn animals. (Croppamide, Crotethamide)
27. Doxapram is available in the trade name .....(Dopram)
28. Aethemizole is a .....derivative having analeptic property. (Xanthine)
29. Yohimbine is an alkaloid obtained from the plant.....(Yohimbehe)
30. Diprenorphine is .....times more active than Nalorphine. (Hundred)
31. Naloxone is .....times more active than Nalorphine (10-30)
- 32..... is the more specific antagonist of morphine than nalorphine. (Naloxone)
33. Chemically Nalorphine is ..... (N-allyl nor morphine)
34. Bemegrade/Megimide is the specific antagonist of .....(Barbiturates)
35. The dose of Megimide in barbiturate toxicity is .....(15-20mg/kg.)
36. Amephenazole/ Daptazole can antagonize the depression caused by ..... (barbiturate, Morphine)
37. Tolazoline is an .....adrenergic blocker (Alpha 2)
38. Inhalation of .....percent CO<sub>2</sub> stimulate the rate and depth of respiration.(2%)
39. Strychnine is an alkaloid obtained from .....(*Strychnos nuxvomica*)
40. Strychnine is a .....stimulant. (Spinal cord)
41. The characteristics posture in strychnine poisoning is known as .....(Opisthotonus)
42. Strychnine will block the post synaptic inhibition by .....(Renshaw cells)
43. Strychnine stimulates motor units by competitively blocking.....(Glycine)
- 44.....(species).are most susceptible to strychnine poisoning .(Dogs/canines)
- 45.....are least susceptible to strychnine poisoning. (Birds)
46. In Cattle Pulv. Nuxvomica is used as a stomachic at a dose of .....gram(2-8 )

47. MAO - A preferentially de aminate .....(5HT)
48. MAO- B preferentially de aminate .....(Phenyl ethyl amine)
49. The first non sedating anxiolytic drug developed is.....(Buspiron)
50. Lithium carbonate can be used to treat .....(Cyclic mood change)
51. .... alcohol is obtained by the fermentation of Grains.(Ethyl alcohol)
- 52..... alcohol is obtained by the destructive distillation of wood. (Methyl alcohol)
53. Methyl alcohol is toxic specifically to .....nerve. (Optic)
- 54.....alcohol is completely utilized for energy production.(Ethyl)
55. Ethyl alcohol inhibits .....hormone and so the quantity of urine is.....  
(ADH, increase)
56. Methyl alcohol is oxidized to .....in the body. (formaldehyde and formic acid)
57. The metabolite of .....give a false +ve test for glucose in urine. (chloral hydras)
58. Metabolism of Ethyl alcohol follows .....order kinetic. (Zero)
59. Habitual use of alcohol is treated by.....therapy . (Antabuse)
60. Ether was first used by ..... (William T. G. Morton)
- 61.....is the drug used along with local anesthetics.(Epinephrine)
- 62.....is a benzodiazepines reversing agent. (Flumazenil)
- 63.....is an endogenous opioid compound.( B- endorphins)
- 64.....is an example of a butyrophenone antipsychotic agent. (Droperidol)
65. Antagonist of Etorphine is ..... .(Diprenorphine)
66. Potency of inhalant anesthetic agent is expressed as.....( M A C )
67. All stages of anesthesia are observed in anesthesia with .....(DiethylEther )
68. A parasympatholytic used as a pre-anesthetic is .....(Atropine sulphate)
69. Thalidomide is reintroduced in therapy for treating .....(Cancer & Leprosy)
70. Thalidomide was banned first because of its ..... effect. (Teratogenic)
71. The toxicity of urethane(bone marrow suppression) in normal animal is  
therapeutically utilized in animal with..... disease. (multiple myeloma)
72. Stage IV of anesthesia is known as ..... (Paralysis and death)
- 73.....is the most potent of inhalant anesthetics. (Mthoxy flurane)
74. Cataleptoid anesthesia is produced by.....(Ketamine)
75. The earliest use of anesthetic agent was recorded about .....BC on a  
Babylonian.....(2250, Clay tablets)
76. In 1799 .....(scientist) announced that Nitrous oxide has the ability to  
destroy pain. (Humphry davy)
77. In 1820 Colton made public demonstrations on property of .....(Laughing gas)
78. In 1824 Hickman performed operations in animal depressed with .....hypoxia.  
(Carbon dioxide)
79. Ketamine was discovered in .....(1967)
80. In closed system of administration of inhalant anesthetic agent .....is used  
to absorb CO<sub>2</sub> . (Sodalime)
81. In 1844 Horace wells extracted his own teeth under .....anesthesia.  
(Nitrous oxide)
82. To judge the depth of barbiturate anesthesia in dogs .....reflex is checked. (Pedal)
83. The ..... action of Ethyl alcohol helps in re establishing the circulation in  
chilled cutaneous surface. (Vasodilator)
84. Opioids cause s excitement in.....species of animal) ( Equine, Horses)
85. Opioids causes depression in .....species. (Canine, Dogs)
86. Blood /gas partition coefficient is represented by the .....symbol. (  $\lambda$  )
- 87.....is a measure of speed of anaesthetic induction and recovery.  
(blood gas partition coefficient)

88. Lower the blood /gas partition coefficient ..... the anesthetic induction.  
(More rapid)
89. Oil /gas partition coefficient correlated directly with anesthetic.....(Potency)
90. Anesthetic potency is .....related to MAC . (Inversely)
91. MAC is ..... related to Oil /gas partition coefficient. (Inversely)
92. Agents of .....anesthetic potency has high MAC and low oil/gas part.  
Coefficient.(low)
93. Halothane is otherwise known as .....(Fluothane/ Somnothane)
94. The most important delayed toxicity of halothane anesthesia is .....(Hepatitis)
95. Isoflurane is available as .....(Forane)
96. Isoflurane is .....potent than Halothane(Less)
97. Isoflurane is less toxic to.....(organs).(Liver and Kidney)
98. Methoxy flurane is available as .....(Metofane, Penthrane)
99. Methoxy flurane produce a condition known as .....in swine.(Malignant  
hyperthermia)
- 100..... is an inhalant anaesthetic used in fishes---MS 222, (Tricaine methane  
sulfonate, Propoxate)
101. Methoxyflurane is highly soluble in blood and so .....induction and  
recovery.(Slow)
102. Methoxyflurane turns to .....colour in vaporizer.(Amber)
103. Sevoflurane is degraded in to a toxic compound called .....in presence of  
Co<sub>2</sub> absorber.(Compound -A)
104. Nitrous oxide is stored in .....coloured cylinders.(Blue)
105. Cyclopropane was introduced in surgery in.....(1929)
106. Halothane was introduced in surgery in..... (1956)
107. Nitrous oxide is .....soluble in blood and so rapid induction and ....recovery.  
(Slightly, Rapid)
108. Nitrous oxide is a .....smelling gas.(Sweet)
109. Prolonged administration of nitrous oxide cause the oxidation of .....atom in  
Vit. B12. (Cobalt)
110. Nitrous oxide alone will produce anesthesia only in .....condition.(Hyperbaric)
- 111.....is least toxic among halogenated ethane group of anesthetics. (Desflurane)
112. Tricaine methane sulfonate is available as .....(MSS 222)
113. Tricaine methane sulfonate is mostly used for inducing anesthesia in.....  
(Cold blooded animals)
114. Medetomidine is .....adrenoceptor agonist.(Alpha 2 )
115. A withdrawal period of .....days must be given before consuming fishes  
immobilized with Tricaine methane sulfonate. (21)
116. Cyclopropane is a highly potent gas which is supplied in .....coloured cylinder  
(Orange)
117. Orally dilute chloroform is .....in action and it is still used in tympany.  
(Carminative)
118. Chloroform is a .....smelling liquid. (Sweet)
119. As a pre anesthetic atropine is used at a dose rate of .....mg/Kg. (0.045)
120. Methyl alcohol is metabolized to .....and formic acid.(Formaldehyde)
121. Strong alcoholic drinks adulterated with a narcotic drugs or laxative is known as  
..... (Knock out drops)
122. Romifidine is .....adrenoceptor agonist.(Alpha 2)
123. Among xanthines .....is an example for chronobiotic.(Theophylline)
- 124.....is a phase resetter of body temperature.(Theophylline)
125. Vinyl ether is used along with .....to induce anesthesia.(Diethyl ether)

- 126.....(Narcotic) causes suppression of bone marrow and so used in myeloma  
(Urethane)
127. Haloperidol is a .....derivative tranquilizer. (Butyrophenone)
128. Thiopentone was introduced in surgery in.....(1935)
129. Malignant hyperthermia is seen in animals like.....(Pigs, Horse, Dogs and Cats)
130. Xenon is less soluble in blood and so induction and recovery is .....(Fast)
131. In ruminants especially.....and.....metabolism of pentobarbitone is very rapid.(Sheep and Goats)
132. Detomidine is an ..... adrenoceptor agonist(Alpha 2)
133. The first inhalation anesthetic agent Nitrous oxide was discovered by.....(Priestely)
134. Deficiency of ..... in the CNS is manifested as Parkinson's disease.(Dopamine)
135. Higher the solubility of inhalant anesthetic in blood .....will be the induction And recovery period.(Longer)
- 136.....is used both as an anesthetic and as an antitussive.(Guaiphenisin)
137. The metabolite of chloral hydrate having anesthetic action is .....( Trichloroethanol)
- 138.....is the major inhibitory neurotransmitter in the brain.(GABA)
139. Strychnine is a competitive antagonist of .....(Glycin).
- 140.....is a phenomenon seen in anesthesia with nitrous oxide.(Diffusion hypoxia)
141. As MAC increases the potency of anesthetic agent .....(Decreases)
- 142.....is an example of an excitatory neurotransmitter.(Glutamate.)
- 143.....is a benzodiazepine commonly used for induction of anesthesia.(Midazolam)
144. Ketamine acts by inhibiting .....receptors.(NMDA)
- 145.....is the sedative of choice in pigs.(Azaperone)
- 145.....is an example of butyrophenone group of tranquilizer. (Haloperidol)
147. Picrotoxin acts by inhibiting .....receptors. (GABA)
148. All the 5HT receptors are G protein coupled except .....(5 HT 3)
149. The main storage site of histamine is .....(Mast cells)
150. Ethyl alcohol is obtained by .....grains and methyl alcohol by
- 151.....wood. (Fermentation of, Destructive distillation of)
152. All typical stages of anesthesia are observed in anesthesia with.....(.Diethylether)
153. Ether was first used for inducing anesthesia by .....(William T.G.Morton)
- 154.....is the most potent inhalant anesthetic.(Methoxy flurane)
155. Stage IV of anesthesia is also known as .....(Paralysis and death)
156. Depth of anesthesia can be easily controlled with .....anesthetics.(Inhalant)
157. The anesthetic of choice for fishes is .....(Saffan)
158. The metabolite of chloral hydrate having anesthetic action is.....(Trichloroethanol)
159. Seeds of .....is some times called as "Quaker buttons ".(*Strychnos nux vomica*)

**Write the active ingredients of:**

1. Immobilon. (Etorphine , acepromazine.)
2. Kemithal. (Thiobarbital)
3. Surital. (Thiamylal)
4. Saffan, Althesin. (Alphaxalone and Alphadalone)
5. Sernylan. (Phencyclidine.)
6. Vetalar. (Ketamine.)
7. Innovar vet. ( Droperidol, Fentanyl.)
8. Nalline. (Nalorphine.)
9. Metofane. (Methoxyflurane)
10. Trilene. (Trichloroethylene.)

11. Rompun. (Xylazine.)

**Write any one trade name each in use:**

1. Butabarbital. (Butisal)
2. Diazepam. (Valium.)
3. Premidon. (Mysolin.)
4. Etorphine. (M99, Oripavin.)
5. Acetazolamide. (Diamox)
6. Metomidate. (Hypnodil.)
7. Guaiifenesin . (Gecolate.)
8. Thiopentone. (Intraval.)
9. Enflurane. (Ethrane.)
10. Barbitone sodium. ( Veronal.)
11. Phenobarbitone sodium. ( Gardinal.)
12. Diprenorphine. (M 50-50.)
13. Pento barbitone. (Nembutal)
14. Chlorpromazine. (Largactil.)
15. Triflupromazine. (Siquil.)
16. Trimeprazine tartrate. (Vallergan)
17. Etorphine .(M-99)
18. Diazepam. (Valium)
19. Enflurane. (Ethrane.)
20. Doxapram. (Dopram.)
21. Amobarbitone. (Amytal.)
22. Ketamine. (Vetalar.)

**State True or False,(T/F):**

1. The CNS stimulant drugs can be classified broadly in to Psychomotor stimulant and psychotomimetics. ( T )
2. Psychomotor stimulants acts by enhancement of excitation or inhibiting the synaptic Inhibition. ( T )
3. The birth place of *Coffea arabica* is Ethiopia. ( T )
4. In hyperacidity coffee is preferred than Tea. ( F )
5. Excess accumulation of c GMP by large quantity of Tea can cause hypo caemia.(T)
6. Theophylline is phase resetter of body temperature. (T)
7. Coffee beverage was first tried by a Prior of an Arabian convent.(T.)
8. Tea enhances the effect of furosemide, digitalis, sympathomimetic amines, anticoagulants and mercurials (T)
9. Coffee arrived in the new world in 1723. (T)
10. Dexamphetamine is used to reduce obesity. (T)
11. Dexamphetamine will give good co-ordination of thinking. (F)
12. Oil of broma can be used as a base for the preparation of suppositories and pessaries.(T)
13. Sympatho-mimetic amines stimulate CNS directly only not indirectly. (F)
14. Amphetamine is orally active. (T)
15. Amphetamine is having anorexigenic action. (T)
16. Dexamphetamine will elevate the mood of the person but co-ordinate thinking is not Possible. (T)
17. Methyl phenidate can be used in attention deficiency disorders. (T)
18. Dexamphetamine will not elevate the mood but co-ordinate thinking is possible.(F)
19. Dexamphetamine will elevate the mood as well as co-ordinate thinking.(F)

20. Nicotine is absorbed even through intact skin.(T)
21. Dexamphetamine will not elevate the mood and have no co-ordinate thinking.(F)
22. Analeptics will cause convulsion in normal animal. (T)
23. Analeptics will save the life of the depressed animal.(T)
24. Analeptics will act for a long time. (F)
25. Nikethamide stimulate respiration directly as well as reflexly. (T)
26. Ethamivan is a related compound to Nikethamide. ( T)
27. Procethamide is a related compound to Nikethamide.(T.)
28. Doxapram is considered to be superior than other analeptics. (T)
29. Doxapram can be used in animals intended for human consumption.(F)
30. Doxapram is administered via umbilical vein in puppies with respiratory suppression at the time of birth. (T)
31. Doxapram is not recommended in morphine suppression. (T)
32. Eventhough Bicucullin is a GABA-A receptor antagonist it is not used as a respiratory revival drug. (T)
33. Bicucullin is used only for research purpose.(T)
34. Nalorphine is a partial antagonist of morphine.(T)
35. Nalorphine is a partial agonist of morphine.(T)
36. Naloxone less potent than Nalorphine.(F)
37. Theobromine is obtained fro Erythroxyton cocoa. (F)
38. Pot. Permanganate can be used for gastric lavage in dogs at a dilution of 1:5000.(T)
39. Pot. Permanganate can be used for gastric lavage in dogs at a dilution of 1:250.(F)
- 40.4-AP effectively reverses intercostals and diaphragmatic paralysis induced by Botulinum toxin.(T)
41. Naloxone is the true antagonist of Morphine.( T )
42. Yohimbine is a competitive Alpha -1 antagonist .(F)
43. Yohimbine can antagonize Xylazine and Clonidine.(T)
44. Ether is an inflammable liquid.( T)
45. Pupil will be constricted in phase II of anesthesia (F)
46. The action of pentobarbitone is increased by salicylates. (T)
47. Nitrous oxide is contraindicated in animals with trapped air pockets. (T)
48. Tolazoline is an Alpha-2 adrenergic blocker. (T)
49. Tolazoline can be used to reverse Xylazine sedation.(T)
50. Carbon dioxide stimulate respiration directly and not reflexly .(F)
51. Ten percent Carbon dioxide in inhalant air produce discomfort. (T)
52. Strychnine stimulation of CNS starts from spinal cord and goes upward to cortex.(T)
53. Strychnine stimulation of CNS begins from cortex and proceed to spinal cord.(F)
55. 54. Strychnine initiate convulsion by itself.(F)
56. Strychnine convert normal reflex activity in to convulsive movement.(T)
57. A minimal sensory impulse is necessary to initiate strychnine convulsion.(T)
58. Strychnine blocks the pre synaptic inhibition by Renshaw cells.(F)
59. Ten to Twenty ml of Tr. Nuxvomica can be administered in cattle .(T)
60. Ginkobiloba antagonise PAF activity and reduce platelet aggregation.(T)
61. Morphine causes constriction of pyloric sphincter.(T)
62. Ginkobiloba stimulate micro circulation.(T)
63. In peripheral adrenergic nerve ending MAO-A is seen more than MAO-B.(T)
64. In areas of brain MAO-A is seen more than MAO-B.(F)
65. MAO inhibitors are grouped under 'Hit and Run' drugs.( T )
66. Consumption of cheese by MAO inhibited patients may cause Cerebro-vascular accidents. (T)
67. Inhibition of dopamine uptake correlate directly with CNS stimulant action.(T)

68. Ethyl alcohol is having Astringent, Refrigerant, and Antiseptic activity. (T)
69. Ethyl alcohol is completely utilized for energy production. (T)
70. Disulfiram inhibits the metabolism of Ethyl alcohol and the intermediate product which accumulates causes the discomforts when alcohol is taken. (T)
71. Phenobarbitone sodium and Phenobarbital sodium are the same. (T)
72. Gardenal is one of the trade name of phenobarbitone sodium. (T)
73. The earliest use of anesthetic agent recorded is use of henbane seed with gum mastic in dental carry pain. (T)
74. In ketamine anaesthesia stage II is not prominent. (T)
75. In barbiturate anesthesia the classical stages of anesthesia is not clear. (T)
76. Pre anesthetic medication is given only for restraining the animal. (F)
77. Pre anesthetic medication is given five minutes before giving anesthetics. (F)
78. Halothane is decomposed by light so stored in a closed clear glass container. (F)
79. Halothane reacts with rubber and polyethylenes. (F)
80. Halothane is having high margin of safety. (F)
81. Halothane will corrode metal except nickel. (T)
82. Halothane is a sweet smelling liquid. (T)
83. Halothane will induce anesthesia fastly. (T)
84. Halothane is having low blood gas partition co-efficient. (T)
85. Halothane often produce malignant hyperthermia in pigs. (T)
86. Halothane increase cerebro spinal fluid pressure and so not recommended in brain Surgery. (T)
87. Halothane antagonize with aminoglycoside antibiotics on skeletal muscles (N.M. blocking effect). (F)
88. Halothane interact with ketamine and prolong the action. (T)
89. Depth or level of anesthesia is better controlled with injectable anesthetics. (F)
90. Ether sensitizes myocardium to circulating adrenaline. (F)
91. Chloral hydras is more irritant than trichloroethylene. (T)
92. Phencyclidine is a dissociative anesthetics. (T)
93. Xylazine has sedative and analgesic effect, but no muscle relaxant effect. (F)
94. Yohimbine is used to reverse the effect of xylazine. (T)
95. Stage II anesthesia is ideal for surgery. (F)
96. The brief duration of thiopentone anesthesia is due to its rapid re-distribution. (F)
97. Naloxone is a pure opioid agonist. (F)
98. Melonyl urea produce anesthesia by CNS depression. (F)
99. Higher the solubility of anesthetic, longer will be its duration of action. (F)
100. Substitutions on alcoholic or phenolic – OH of morphine nucleus enhances analgesic property. (F)
102. Chemically heroin is diacetyl morphine and codeine is methyl morphine. (T)
103. Chloroform is a highly inflammable liquid. (F)
104. Chloroform is a sweet smelling liquid. (T)
105. By fermentation of grains we can produce methyl alcohol. (F)
106. Methyl alcohol is neurotoxic. (T)
107. Chloral hydras is having a latent period of action. (T)
108. Althesin is not recommended in dogs. (T)
109. Tricaine methane sulfonate can be used as a fish anesthetic. (T)
110. Benzodiazepines are contra indicated in Grey hound breeds. (T)
111. Althesin is a mixture of alphaxalone and alphadalone in the ratio 1: 3. (F)
112. Althesin is a mixture of alphaxalone and alphadalone in the ratio 3: 1. (T)
113. Ethyl alcohol stimulate the release of ADH. (F)
114. Malignant hyperthermia is seen in some breeds of Swine, Horse and some

- human beings.(T)
115. Malignant hyperthermia can be prevented by prior administration of skeletal muscle Relaxant.(T)
  116. Halothane sensitise the heart to catecholamines.(T)
  117. Methoxyflurane is more potent than Halothane.(T)
  118. Methoxyflurane is having sweet fruity odor. (T)
  119. Methoxyflurane is broken down by sunlight and sodalime.(T)
  120. Methoxyflurane bypasses stage II of anesthesia.(T)
  121. Methoxyflurane sensitise the heart to epinephrine.(T)
  122. Control of anesthesia is easy with Methoxyflurane.(F)
  123. Enflurane is available as Ethrane.(T)
  124. Nitrous oxide is inflammable.(F)
  125. Corneal reflex will disappear in stage II of anesthesia. (F)
  126. Pedal reflex will disappear in stage III of anesthesia.(T)
  127. General anesthesia can be achieved by CNS depressants, and also by functional disruption by marked CNS stimulation.(T)
  128. Isoflurane resist biodegradation.(T)
  129. Nitrous oxide is mostly used along with other gases for anesthesia.(T)
  130. Nitrous oxide will give good muscle relaxation.(F)
  131. Diethyl ether is a highly inflammable gas.(F)
  132. Diethyl ether is synergistic with aminoglycosides on skeletal muscle relaxation.(T)
  133. Diethyl ether will give good muscle relaxation.(T)
  134. Desflurane is available as Suprane.(T)
  135. Ethyl chloride is a gas at ordinary temperature and pressure .(T)
  136. Tricaine methane sulphonate can be used to immobilize snakes.(T)
  137. Tricaine methane sulphonate at lower doses immobilize fishes .(T)
  138. Diethyl ether is highly inflammable.(T)
  139. Chloroform is highly inflammable.(F)
  140. Chloroform is noninflammable.(T)
  141. Diethyl ether is highly inflammable as chloroform.(F)
  142. Chloroform is decomposed by light to a toxic products chlorine and phosgene.(T)
  143. Chloretone can be recommended for gastritis in dogs.(T)
  144. Chloretone is included in some dusting powder for its local anesthetic action.(T)
  145. Chloretone is used as a preservative in injectables.(T)
  146. Chloretone is included in injectables to reduce pain of administration.(F)
  147. Methyl alcohol is obtained by destructive distillation of wood.(T)
  148. Methylated spirit is Ethyl alcohol to which methyl alcohol is added.(T)
  149. Tolerance to barbiturate will disappear in 2 weeks on discontinuation.(T)
  150. Caffeine stimulate Gastric acid secretion.(T)
  151. Strychnine stimulate spinal cord by inhibiting GABA system.(F)
  152. All the barbiturate are having white colour.(F)
  153. Opisthotonus is a characteristic muscle contraction in strychnine poisoning.(T )
  154. Morphine is less powerful than codeine as a cough suppressant.(F)
  155. Nitrous oxide may cause teratogenic effect in pregnant animals.(T)
  156. Propofol is an emulsion form of injectable general anesthetic.(T)
  157. Propofol produce the effect by enhancing the functions of GABA.(T)
  158. Diazepam has an affinity for plastics so it is not advisable to store in such containers.(T)
  159. Most of the metabolites of Benzodiazepines are pharmacologically inactive.(F)
  160. Alprazolam should not be given along with ketoconazole.(T)

161. Propofol causes Heinz body formation in dogs.(T)
162. Many metabolite of Barbiturates are pharmacologically active.(F)
163. Barbiturates are powerful hepatic microsomal enzyme inducers.(T)
164. Chlorpromazine blocks Dopamine-2 receptors.(T )
165. Chlorpromazine blocks prolactin secretion.(F)
165. Acepromazine must be used with caution in Horses.(T)
166. Acepromazine may cause penial prolapse in Horse.(T)
167. As the blood gas partition coefficient of anesthetic agent is low, faster the induction and recovery.(T)
168. Oil gas partition coefficient of anesthetic agent represent the potency of the drug.(T)
169. Higher the solubility of anesthetic, longer will be it's duration of action.(T)
170. Chloral hydras is more irritant than trichloroethanol.(T)
171. Stage II of anesthesia is ideal for surgery.(F)
172. The brief duration of Thiopentone anesthesia is due to it's rapid redistribution.(F)

**Underline/Choose the correct answer from the given ones:**

1. Psychomotor stimulants causes a)Excitement b) Relieve fatigue c) Increase motor activity d)All the above. ( D )
2. Psychotomimetics are a)Hallucinogenic b) Less effect of brain and spinal cord c)Changes the thinking pattern and mood d)All the above. ( D )
3. An average cup of coffee contain a)50-100mg coffee b)25 mg c) 500 mg d) None of the above. (A)
4. Xanthines causes diuresis by a) Interfere re absorption of sodium and chlorine b) Specific relaxation of afferent vessels c) More glomeruli is put in to use d) All the above. (D)
5. Coffee beverages can be used a) To relieve head ache b) To increase urine quantity c) To overcome fatigue d) All the above. (D)
6. Theobromine is present more in a) Coffee b) Cocoa c) Tea d) None of the above. (B)
7. In Oedema the choice among xanthines is a) Caffeine b) Theophylline c) Theobromine d) All the above. ( C )
8. Imipramine blocks the uptake of a) Nor Epinephrine b) 5HT c) Dopamine d) All the above.( D )
9. One of the following drugs is a major inhalant anesthetics a) Halothane b) Diethyl ether c) Nitrous oxide d) Enflurane. ( A )
10. Repeated administration of barbiturate causes a) Tolerance b) Drug dependence c) Toxicity d) All the above. ( D )
11. Halothane is metabolized in to a) Trifluoroacetic acid b) Inorganic chloride c) Bromine d) All the above. ( D )
12. Among the following which one is preferred in neurosurgery a) Halothane b) Enflurane c) Methoxy flurane d) Nitrous oxide. ( B )
13. Metabolic product of following drug causes behavioral change in cats after 2-3 days after administration a) Enflurane b) Methoxy flurane c) halothane d) Xylazine .( A )
14. One of the following is recommended mostly in Horses a) Nitrous oxide b) Halothane c) Methoxy flurane d) Enflurane.( D )
15. Least toxic among the following is a) Halothane b) Desflurane c) Methoxyflurane c) Sevoflurane. ( B )
16. The half life of slow elimination Benzodiazepine is a) 20-100 hours b) 15 days c) 4-5 hours d) 10-20 hours. (A)
17. Chloretone posses a) CNS depressant action b) Antiseptic action c) Anti emetic action d)All the above. (D)
18. 1,3,7 Trimethyl xanthine is otherwise known as a)Caffeine b) Theophylline

- c) Theobromine d) Hyocyamine. ( A )
19. Cocaine is obtained from a) *Theobroma cacao* b) *Erythroxylon coca* c) *Thea sinensis* d) *Datura stramonium*. ( B )
20. The alkaloid present in *Ephedra sennica* is a) Theobromine b) Dexedrine c) Ephedrine d) Cocaine. ( C )
21. Nalorphine is a a) Partial agonist b) Obtained from Opium c) An agonist d) Pure Antagonist. ( A )
22. Analeptics are a) Cortical stimulants b) Medullary stimulants c) Spinal cord stimulants d) CNS depressants. ( B )
23. One of the following is a spinal cord stimulant a) Xanthines b) Lobelline c) Strychnine d) Atropine. ( C )
24. Theobromine is a) 1, 3 dimethyl xanthine b) 1,3,7, trimethyl xanthine c) 3,7 dimethyl xanthine d) not a xanthine. ( C )
25. The major alkaloid present in cocoa is a) Theobromine b) Caffeine c) Theophylline d) Cocaine. ( A )
26. Caffeine a) increases the urine b) decreases the urine c) no action d) produce stones. ( A )
27. Xanthines a) relieve fatigue b) enhances fatigue c) no action d) produce convulsion. ( A )
28. Irritation of G.I. mucosa is more with a) Tea b) Coffee c) cocoa, d) sugar. ( B )
29. Caffeine inhibits a) Stimulate phosphodiesterase b) Inhibits phosphodiesterase c) inhibits cAMP d) stimulate acetyl choline. ( B )
30. Amino phylline is preferred over theophylline because a) amino phylline is less active b) it is more soluble c) it is less soluble d) none of the above. ( B )
31. Xanthines enhances the action of a) Thiazides b) Mercurials c) Diamox d) Barbiturates. ( B )
32. Theophylline is a chronobiotic because a) It produce yellow color with nitric acid b) affect the circadian rhythm c) destroy bacteria d) none of the above. ( B )
33. Amphetamine is a a) synthetic CNS stimulant b) Spinal cord stimulant c) since the name ends in 'ine' is an alkaloid d) None of the above. ( A )
34. Amphetamine causes a) prolonged diuresis b) prolonged rise of blood pressure c) stimulation of spinal cord d) depress CNS. ( B )
35. Analeptics are widely used as a) anti epileptic drug b) analgesic agent c) diuretics d) medullary stimulant. ( D )
36. Pentylenetetrazole is called as Leptazole in a) U S P b) N F c) B P d) I P . ( A )
37. Pentylenetetrazole inhibits the a) cholinergic action b) adrenergic action c) GABA ergic inhibition d) block the ganglia. ( C )
38. Among analeptics the superior one is a) Leptazol b) Doxapram c) Cardiazol d) 4-AP. ( B )
39. Bicucullin acts as a convulsant by a) stimulation of cholinergic receptors b) GABA- A receptors antagonism c) Adrenergic stimulation d) none of the above. ( B )
40. The specific antagonist of barbiturate is a) Megimide b) Atropine c) Nalorphine d) Doxapram. ( A )
41. Strychnine is a) bitter to taste b) sour to taste c) sweet to taste d) no taste. ( A )
42. The characteristic convulsion caused by strychnine is a) clonic convulsion b) opisthotonus c) intermittent d) none of the above. ( B )
43. Stimulation of spinal cord by strychnine is by a) blocking Renshaw cells b) stimulation of cholinergic receptor c) blocking adrenergic neuron d) none of the above. ( A )
44. In strychnine poisoning death is by a) arrest of heart beat b) arrest of respiration c) cortical stimulation d) none of the above. ( B )

45. Cerebro active drugs can be used in a) CNS depression b) inhalant anesthesia toxicity  
c) senile dementia d) injectable anesthesia toxicity. ( C )
46. The important difference between Hypnosis and Narcosis a) Hypnosis all reflexes Are present except few but in Narcosis no reflex b) Hypnosis can be reversed by external stimuli but not narcosis c) hypnosis can be reversed but not narcosis d) none of the above. (B)
47. Methyl alcohol is mainly a) haemotoxic b) nephrotoxic c) hepatotoxic  
d) neurotoxic. (D)
48. For drinking we are using a) Methyl alcohol b) Isopropyl alcohol c) Methylated spirit  
d) Ethyl alcohol. (d)
49. The toxic metabolic product, formaldehyde and formic acid is produced by a) Ethyl alcohol b) Methyl alcohol c) Iso propyl alcohol d) denatured alcohol. (B)
50. The antidote of methyl alcohol is a) Disulfiram b) Ethyl alcohol c) Isopropyl alcohol  
d) none of the above. (B)
51. The duration of action of lorazepam is a) less than diazepam b) more than diazepam  
c) equal in duration d) no comparison. ( A )
52. Triple bromides are a) bromides of sodium, potassium, ammonium b) bromides of sodium potassium magnesium c) bromides of sodium magnesium and calcium  
d) any three of the above (A)
53. Gardenal contain a) Phenobarbitone b) Pentobarbitone c) Guanethidine  
d) Reserpine. (A)
54. The difference between general and surgical anesthesia is only with respect to a) loss of consciousness b) muscle relaxation c) loss of sensation d) none of the above. (B)
55. To induce anesthesia diethyl ether was used first time by a) Humphry Davy  
b) Faraday c) William T G Morton d) none of the above. (C)
56. The stage of Delirium is a) involuntary excitement b) voluntary excitement  
c) induction d) deep anesthesia. (B)
57. Stage II of anesthesia is not produced by a) ether b) chloroform c) methoxy flurane  
d) none of the above. ( C )
58. Ketamine does not produce a) stage III of anesthesia b) stage I of anesthesia  
c) stage I & II of anesthesia d) any stage. (A)
59. In inhalant anesthesia pedal reflex will be abolished in a) stage II b) stage I  
c) stage III d) plane IV. (C)
60. Methoxy flurane will induce anesthesia a) slowly b) fastly c) suddenly  
d) locally. (A)
61. Solubility of Methoxy flurane in blood is a) less b) highly c) medium  
d) not soluble. (B)
62. Halothane will not react with a) chromium b) polyethylenes c) rubber d) nickel. (B)
63. Halothane is synergistic with amino glycoside antibiotic in a) antibacterial action  
b) allergic action c) muscle relaxant action d) CNS depression. ( C )
64. Methoxy flurane is a a) volatile gas b) non volatile gas c) volatile liquid  
d) nonvolatile liquid. ( C )
65. Malignant hyperthermia is associated with anesthetic agent like a) Ether  
b) Halothane c) Barbiturate d) Chloroform. ( B )
66. Nitrous oxide alone can produce anesthesia only in a) liver disease b) open method of administration c) hyperbaric condition d) closed method of administration. (C )
67. Diethyl ether is a) nonflammable b) inflammable c) carminative  
d) non volatile. ( B )
68. Barbituric acid is obtained by reacting a) Urea & Melonic acid b) Barbiturate &

- hydrochloric acid c) Barbiturate & acetic acid d) none of the above. ( A)
69. Barbituric acid is having a) no action on CNS b) stimulate CNS c) suppress CNS d) excitation. ( A)
70. Short chain compounds attached to 5<sup>th</sup> carbon atom of barbituric acid gives a) ultra short action b) short action c) long action d) medium duration. ( C )
71. Replacement of Oxygen atom on carbon 2 of barbituric acid by Sulphur a) increases the potency b) increases the duration c) decreases the stability d) decreases the excretion. (A)
72. Pentobarbitone sodium is an example for a) ultrashort acting compound b) short acting c) long acting d) none of the above.( B)
73. Pentothal sodium is a) sulphur containing barbiturate b) long acting barbiturate c) short acting barbiturate d) none of the above. ( A )
74. The dose of Pentobarbitone for dogs a) 25-30mg/kg b) 30-45 mg/kg c) 55 mg/kg d)100 mg/kg. ( A )
75. To block the excess cholinergic stimulation the most commonly used pre anesthetic is a) Coramine b) Doxapram c) Atropine d)Largactil. ( C )
76. Barbiturates a) inhibits hepatic microsomal enzymes b) induce hepatic microsomal enzymes c) destroy hepatic tissue d) no action. ( B)
77. Intra venous dextrose can be used to a) prolong the barbiturate anesthesia b) shorten the period c) No action d) hasten the recovery. ( A )
78. Guaiifenesin is an anesthetic agent having a) antipyretic action b) diuretic action c) CNS stimulant d) none of the above. ( A)
79. Althesin is a mixture of 2 steroids a) Betamethasone & cortisone b) Dexamethasone & Cortisone c) Cortisone & Triamcinolone d) Alphaxalone & Alphadalone. ( D )
80. Althesin causes allergy in dogs due to a) Alphaxalone b) Alphadalone c) Cremophore- EL d) none of the above. ( C )
81. Chemically ketamine is a) steroid b) barbiturate derivative c) aryl cycloalkylamine d) none of the above. ( C)
82. Sernylan contain a) ketamine b) phencyclidine c) xylazine d) none of the above. (B)
83. Opened eye is a characteristic feature of a) Xylazine b) Ketamine c) Ether d) Intraval Sodium. (B)
84. Helibron mixture contain a) Chloral hydras & Mag. sulph b) Ether & Chloroform c)Ketamine & Xylazine d) none of the above. (C)
85. Zoletil contain a) Tiletamine & Zolazepam b) Ketamine & Xylazine c) Ether & Chloroform d) none of the above.( A)
86. 4-Aminopyridine & Yohimbine is an antidote for a) Barbiturate b) Chloral mag. Sulph c) Ketamine & Xylazine d) none of the above. ( C)
87. Innovar-vet is a combination of a) Ketamine &Xylazine b) 4 Amino pyridine & Yohimbine c) Chloral Mag. Sulph d) Droperidol & Fentanyl. ( D)
88. Etorphin is a) Morphine derivative b) Codeine derivative c) Thebaine derivative d)none of the above. ( C)
89. Chlorpromazine is a a) Rauwolfia derivative b)Benzodiazepines c)Butyrophenones d) Phenothiazines. ( D)
90. Droperidol is a a) Butyrophenone derivative b) Phenothiazine c) Benzodiazepines d) none of the above. ( A)
91. Opium is the a)name of a plant b) is the name of seed capsule c) alkaloid of *Papaver somniferum* d) exudates from seed capsule of Poppy plant. ( D)
92. Morphine is a stimulant in a) Dogs b) Human c) Horse d)Cats. (D)
93. The most important alkaloid present in opium is a) Codeine b) Thebaine c)Caffeine d) Morphine . ( D)
94. Morphine causes a) dilatation of pupil b) pinpoint pupil c) suppression of vomition

- d) all the above. (B)
95. Diprenorphine is an antagonist of a) Nalorphine b) Naloxon c) Etorphine  
d) Acepromazine.(C)
96. Effect of Enkephalin can be blocked by a) Naloxon b)Morphine c) Caffeine  
d) none of the above. (A)
97. Cocaine is obtained from a) *Erythroxylon coca* b) *Theobroma cacao* c) *Strychnos potatorum* d) none of the above.(A)
98. Cocaine is active a) only internally b) only topically c) both topical & internal  
d) not by any means. ( C)
99. Procaine is a) an alkaloid b) a synthetic local anesthetic c) glycoside  
d) none of the above. (B)
100. Etorphine toxicity is affected by increase in ambient temperature a)Increase  
b) decrease c)no change d) no influence .(A)
101. Barbituric acid is having actions on CNS a) stimulation b) depression  
c) no action. (C)
102. Thiopentone gives deep anesthesia for a) 20-30 b) 10-20 c) 30-50 min. (B)

**Write the important action of the following drugs ( one word):**

1. Strychnine on spinal cord.(stimulant)
2. Atropine on vagus nerve.(blocks)
3. Ethyl alcohol on urine production.(increase)
4. Ethyl alcohol on taste buds.(stimulate)
5. Chronic alcoholism on intestinal mucous membrane.(Induration.)
6. Apomorphine on vomition.(stimulate)
7. Chloral hydras as such on CNS.(no action)
8. Xylazine on muscle tone.(loss)
9. Bromide on CNS.(depress)
10. Caffeine on urine production.(stimulate)
11. Ketamine on pupil .(dilate)
12. Morphine on pupil .(constrict)
13. Morphine on sphincter muscles of G.I tract..(constrict.)

**Underline the correct answer:**

1. Gastric acid is stimulated / inhibited by caffeine.
2. Caffeine can be indicated / not indicated in gout.
3. Amphetamine is having short / long duration of action on blood pressure.
4. Dexamphetamine is having more / less CNS stimulation than Amphetamine
5. Methyl alcohol is metabolized to Acetaldehyde / Formaldehyde.
6. Metabolism of Ethyl alcohol follows Zero order / First order kinetics.
7. The most important advantage of inhalant anaesthesia is Moment- moment control is possible / Sudden induction
8. Morphine is a stimulant in Dogs / Cats.
9. Halothane is Preferred / Not recommended in animal with bronchospasm.
10. Dry ice is Compressed / Soldified carbon dioxide.
11. Benzodiazepines Potentiate / Inhibits the action of GABA.
12. Coffee usage may cause Habituation / Addiction.
13. Caffeine causes Constriction / Relaxation of bronchi.
14. Amphetamine Inhibits / Stimulate MAO thereby enhancing the action of nor adrenaline and dopamine
15. Barbituric acid is a CNS depressant/ no action on CNS
16. Etorphine toxicity increase/ decrease by increase in ambient temperature.

17. Thiopentone gives deep anesthesia for .....20-30, / 10-20 min
18. The dose of Thiopentone sodium in dogs 15-17 mg.kg, / 25-30 mg.kg.
19. The dose of atropine as a pre-anesthetic is 0.05 mg.kg,/ 5mg.kg.
20. Ethyl / Methyl alcohol causes optic nerve damage.
21. Methoxyflurane is equally/ more / less potent than halothane.
22. Etorphine is a Morphine/ Thebaine / codeine derivative.
23. Alphadalone and Alphaxalone is mixed in the ration 1:3 / 3:1 in althesin.
24. Among these Thiopentone / Pentobarbitone / Phenobarbitone is a chronobiotic.
25. Branched chain on C5 of barbituric acid gives shorter / equal / longer action.
26. The dose of Pentobarbitone in dog is 15-20 / 15-70 / 25 -30.
27. Megimide is an antidote for barbiturate @ 20 / 10 / 50 / mg/kg i.v.

**Odd one out ( by underlining) and justify:**

1. Methoxyflurane, Halothane, Diethyl ether, Chloroform Isoflurane, Nitrous oxide—  
\_Only one Gaseous.
2. Caffeine, Theophylline, Theobromine, Morphine, Cocaine —only CNS depressant.
3. Xanthines, Ephedrine, Strychnine, Cocaine, Nicotine, --only spinal cord stimulant
4. Halothane, Pentobarbitone, Ketamine, Xylazine, Althesine, —only inhalant anaesthetic.
5. Nitrous oxide, Carbon dioxide, Cyclopropane, Halothane -only liquid
6. Procaine, Amethocaine, Cocaine, Benzocaine---all others are synthetic
7. Xylazine, Phencyclidine, Ketamine, Tiletamine.—others are dissociative anaesthetics.

**State reasons for ( one sentence only):**

1. Cream is added to black coffee.(to reduce irritation and acid production.)
2. Pentobarbitone is not recommended in grey hounds .(highly sensitive and so toxic.)
3. Dogs with morphine hypnosis must be must be handled gently.  
(causes hypnotic excitement.)
4. Trichloroethylene is not advisable in closed system where soda lime is used as  
Carbon dioxide absorber(produce phosgene-toxic.)

**Differentiate between:**

- 1) Ataractics and anesthetics? (Ataractics are agents which will produce perfect peace or calmness of mind , Anesthetics are agents which will cause loss of sensation.)
- 2) Hypnotics and Narcotics? (Hypnotics are agents which produce sleep and can be awaked by external stimuli, Narcotics are agents which will produce deep sleep with reduction in vital activity, which can not be reversed with external stimuli.)
- 3) Analgesics and anesthetics: (Agents which causes relief of pain without loss of consciousness. Anesthetics are agents which cause loss of all sensations.)
- 4) Local anesthetics and general anesthetics: (Local anesthetics cause the loss of sensation locally, General anesthetics causes loss of consciousness along with sensation.)
- 5) Catalepsy and Narcolepsy: (Catalepsy is the reversible rigidity of skeletal muscles- animal tends to remain in any position of placement while the drug is acting. Narcolepsy is recurrent uncontrollable desire for sleep.)

**Define / explain in 1-2 sentences (need explanation on the points given below):**

1. Aminophylline is preferred over Theophylline Why? (It is more soluble and have less

- side effect)
2. Sedation ( Mildest form of CNS suppression, little dull, normal reactivity is less, vital functions are normal)
  3. Hypnosis ( Sleeping can be awaked and made fully conscious by external stimuli.)
  4. Narcosis (Deep sleep-vital activity lowered, difficult to awake by external stimuli).
  5. General Anesthesia. (Reversible loss of sensation and consciousness.)
  6. Surgical anesthesia. (General anesthesia with sufficient muscle relaxation)
  7. “Drug automatism”.( phenomenon seen in case of treatment with certain drugs) because of confusion and amnesia patient may repeatedly take the drug at night and poisoned himself- eg. Phenobarbitone.
  8. Analgesia. ( Relief of pain without loss of consciousness.
  9. Amnesia.( Inability to remember past experiences)
  10. Ataraxia.( Perfect peace or calmness of mind.)
  11. Basal anesthesia. (Light level of anesthesia produced generally by pre anesthetic medication.)
  12. Balanced anesthesia. ( General anesthesia produced by the use of several agents Sensory blocking by analgesics, motor blocking by barbiturate, reflexes by atropine, mental by ataractics)
  13. Catalepsy. ( Condition characterized by reversible rigidity of skeletal muscles-animal tends to remain in any position of placement while the drug is acting.)
  14. Neuroleptanalgesia. ( condition produced by combined use of neuroleptic and analgesic agents)
  15. MAC. (Minimul Alveolar Concentration-Alveolar concentration of an anesthetic agent ) that prevent gross purposeful movement in 50% of the subject exposed to supramaximal noxious stimuli.
  16. Arrange the following drugs in the order of potency,Decending order.  
Halothane, Isoflurane, Methoxyflurane,suprane, Enflurane and Nitrous oxide.  
1.Methoxy flurane 2.Halothane 3.Ispflurane 4.Enflurane 5.Suprane 6. Nitrous oxide.
  17. “Mickey fins” (strong alcoholic drinks adulterated with a narcotic or laxative, and chloral hydras).

**Write short notes on :**

- 1.Caffeine.(1,3,7 trimethyl xanthine ,main alkaloid present in coffee seeds, seen also in tea leaves, mate, guarana, kolanuts etc.small amounts stimulate motor areas and then sensory areas, excess stimulation cause exertion and depression, produce habituation. Stimulate resp. vagus, vasomotor centers, stimulate heart counteracted by vagus, relax bronchi, diuresis, releave fatigue, gastric and bronchial secretion increase, releave hypertension headache, cAMP accumulation via inhibition of phosphodiesterase, blocks adenosine receptors , caffeine citrate is used.)
2. Theophylline.(1,3 di methyl xanthine, main alkaloid present on tea leaves (devine leaf), action similar to caffeine, more effective in relaxing bronchi, potentiate the action of mercurial diuretics, more effective in relaxing bronchi, blocks adenosine A1 and A2 receptors, causes accumulation of cGMP, more useful in pulmonary emphysema and pul. congession, replaced by aminophylline because of more solubility and less side effect, Aminophylline for Horse 2-5 gm daily oral, effective as a phase resetter of body temperature, it is included as a chronobiotic.)

3. Theobromine.(3, 7 dimethyl xanthine, main alkaloid in cocoa seeds, general action similar to caffeine less intense and more prolonged diuresis, good in oedema accompanied by renal failure.)
4. Sympatho mimetic amines.(These compounds stimulate sympathetic system- Amphetamine- synthetic, white powder, orally active long duration, related to epinephrine, stimulate myocardium, stimulate respiration, relax bronchi, directly and indirect action, peripheral vaso- constriction, inhibit MAO and so enhance action of Nor adrenaline and dopamine in CNS, increase BP for a long time, anorexiogenic action, elevate the mood but co-ordinate thinking is not possible. Toxicity-confussion, anorexia, euphoria, insomnia, suicidal tendency in mentally ill patients.)
5. Ephedrine. (Alkaloid present in *Ephedra sennica* sympatho mimetic,(Mahuang plant in china)moderate CNS stimulant, tachy phylaxis, long duration of action, bronchodilator.)
6. Cocaine.(Alkaloid from *erythroxylon coca*, CNS stimulant, local anesthetic, block nor adrenaline , dopamine, serotonin reuptake in to pre-synaptic nerve terminals resulting in more duration of action, prolonged dopaminergic action of brain pleasure system, euphoria and addiction.)
7. Analeptics.(agents which stimulate vital centers in brain stem and save the life , (respiratory revival drugs, life saving drugs)Pentylene tetrazole, Nikethamide, Doxapram, stimulate CNS especially medulla, in normal animal causes convulsion, depressed animal save the life, very powerful, stimulation followed by afterdepression. Pentylene tetrazole- Interfere with GABA ergic inhibition, mainly used as lab. Tool to test anticonvulsants. Nikethamide stimulate respiration directly and reflexly via chemoreceptors of carotid and aortic body, short duration. Doxapram –most superior, direct and reflex stimulation, wide margin of safety, selective on respiratory centre, not approve for animal intended for human consumption, Dogs and cats- 2mg/kg for barbiturate suppression.)
8. Cognition enhancers.(Cognition is the process involved in knowing / perceving. Piracetam is one of the agent. GABA derivative.-enhances learning and memory-can be used in senile dementia- memory disturbances-mental retardation in children-learning defect-attention deficiency disorders(ADD). It stimulate neuronal metabolism, neurotransmission-improve ATP/ADP ratio in telencephalon-improve interhemisphere information transfer).
9. CNS stimulant purines. (points: Caffeine, Theophylline, Theobromine.---explain)
10. Uses of Xanthines (points: As a broncho dilator, To increase urine, overcome fatigue, relieve headache.)
11. Xanthines.(Caffeine, Theophylline, Theobromine.)
12. Cortical stimulants .( Xanthines, Sympathomimetic amines, Ephedrine,Cocaine, Methyl phenidate, Nicotine, )
13. Doxapram,. ( Dopram).(most superior to all other analeptics, direct and reflex stimulation, wide margin of safety, selective on respiratory centre, not approve for animal intended for human consumption, Dogs and cats- 2mg/kg for barbiturate suppression.)

14. Strychnine. (Alkaloid present in *Strychnos nuxvomica* seeds, hydrochloride and sulphate salts are used, stimulate CNS starts from spinal cord, convert reflex excitability into convulsive movement, very painful convulsion, (opisthotonus) not initiate convulsion by itself, external stimuli is essential, generalized tonic contraction, finally intercostals muscle contraction and respiratory arrest, Blocks the Renshaw cells (Glycine) they are the inhibitory interneurons in spinal cord. birds are resistant, ruminants are comparatively resistant, dogs are most susceptible, clinically used as bitter stomachic in ruminants, stimulate motility of G.I. tract, Paraplegia and incontinence of urine in dogs, generalized nervous tonic.)

15. Spinal cord stimulants. (Strychnine-- explain on this.)

16. Specific antagonists. (Agents which will stimulate CNS if it is depressed due to specific agents. Amiphenazole specific in barbiturate and morphine. Nalorphine in morphine suppression. Naloxon + yohimbine in ketamine - xylazine anesthesia. 4AP + Naloxon in droperidol fentanyl combination. 4 AP + Doxapram in xylazine sedation. 4AP reverse the intercostals and diaphragmatic paralysis by Amino glycosides, botulinum toxins, It stimulate a number of neuro transmitter in the brain. Yohimbine is an alpha 2 antagonist blocks the alpha 2 stimulant action of xylazine and clonidine. Tolazoline an alpha 2 antagonist blocks xylazine sedation.)

17. Reflex medullary stimulants. (Reflexes arise from the irritation of nose and throat stimulate medulla especially respiration, reflex stimulations are more powerful than direct stimulation, Ammonium carbonate ( smelling salt) and aromatic spirit of ammonia. Lobeline – an alkaloid from *lobelia inflata*, stimulate carotid sinus.)

18. Mood elevators/ antidepressants. (agents which elevate the mood in depressive illness. MAO inhibitors like Amphetamine, Nilamide, Pargyline, Clorgiline, Selegiline. MAO deaminate adrenaline, nor adrenaline, dopamine, 5HT. By blocking this prolonged action of monoamines, mood elevation begins in 3 weeks, some time leads to hypomanic condition, action will continue for 2-3 weeks after withdrawal of medicine, so called 'Hit and run drugs' Interact with fermented and pickled food so be careful otherwise cerebrovascular accidents may happen. Tricyclic compounds like Imipramine, Mianserine, Fluoxetine inhibits the active uptake of biogenic amine into neurons.)

19. Actions of Ethyl alcohol. (Initial depression of the depressor centers, Vaso dilatation of cutaneous, and mucosal vessels, stimulate food absorption, increase urine production, Carminative, Correct irregular spasm of G.I tract, stimulate taste buds, increase G.I secretion, relieve frost bite.)

20. Toxicity of Ethyl alcohol. (chronic excessive ingestion causes neurological disorders, memory loss, sleep disturbances, induration of G.I. mucosa, less absorption of nutrients - deficiency symptoms, cirrhosis, deleterious effect on heart. Habituation.)

21. Phenobarbitone. (Gardinal) . (common sleeping pills, long acting, GABA enhancers, Broad spectrum of anticonvulsant action, depress motor centre in cortex, action in 1-2 hrs orally, metabolized by liver, induce hepatic microsomal enzymes, increase wt. of liver, enhance metabolism of a number of substances, wt gain, polyphagia, polydipsia, bone marrow discrasia, contra indicated in hepatic disease, pregnant mother, nursing mother. Dogs-1-2mg/kg  
 BID orally as anticonvulsant, Cats-1.5-2 mg/kg.)

22. Tachyphylaxis. (Phenomenon of development of acute resistance to a drug- Ephedrine is example, causes the release of stored Catecholamines, Repeated use cause exhaustion of these stored mediator, then no action- until synthesis of new mediator happens.)
23. Treatment of Strychnine poisoning.(points: Provide perfect calm environment, gastric lavage, Anticonvulsants, CNS suppressants)
24. Use of Pulvis nuxvomica in cattle.( As a bitter stomachic , Stimulate motility of Dig. tract, incontinence of urine, general nervine tonic.)
25. Metabolism of Ethyl and Methyl alcohol.(ethyl alcohol is metabolized to acetaldehyde- acetyl CoA-citric acid cycle- completely utilized for energy production- 100 gm alcohol is equal to 78 gm fat-metabolism follow zero order kinetic- 120 mg/kg/hr.-methyl alcohol is metabolized to formaldehyde and formic acid –both are highly toxic.)
26. Properties of an ideal general anesthetic agent.  
(It must be potent, non inflammable, non explosive, non irritant, stable, free from disagreeable odor, rapid and smooth induction, and recovery, not cause serious physiological changes, easily vaporized under ambient condition, analgesic and muscle relaxant effect, must have antidotes, compatible with pre medicants and economic)
27. Delerium.(It is the stage II of anesthesia, involuntary excitement, violent involuntary movement, muscle tone increase, loss of consciousness, holding of breath, rapid pulse, dilated pupil, rolling of eye ball( nystagmus), salivation, urination, defecation, production of characteristic sound, laryngeal spasm and closure of airway, muscle relaxants blocks this, some agents like halothane, methoxyflurane bypasses stageII, In barbiturate also it is not clear.)
28. Stage III of inhalant anesthesia.(Stage III is surgical anesthesia, divided in to 4 planes( light, medium, deep, and excessive surgical anesthesia) plane-I nystagmus, miosis, flaccidity of tail, muscle relaxant, swallowing reflex suppressed, pedal reflex absent, respiration slow and regular. PlaneII-corneal and eyelid reflex absent, more muscle relaxation, respiration slow and steady., planeIII-respiration chiefly abdominal, much more muscle relaxation, fall in B.P., rapid pulse, reduce temperature. planeIV- respiration purely abdominal, pale mucous membrane, weak pulse, faster heart rate, medullary paralysis, pupil max. dilated)
29. How will you test the following reflexes, Pedal , Corneal, Palpebral, Swallowing and Skin? (pedal-pinching of inter digital skin with our finger tips, if reflex is present it will withdraw the limbs or the withdrawal tension can feel on our hand. corneal-a piece of sterile cotton dipped in normal saline and squeeze it , gently touch the cornea with the sterile cotton if reflexes are present eyes will be closed. palpebral-touching the eye lashes with fingers causes the closure of the eye lids if reflex is present, skin reflex-hold the skin with a rat tooth forceps the skin will twitch if reflex is present. Swallowing reflex. A smooth rubber tube lubricated with Vaseline, slowly put in to the throat of the animal after opening the mouth we can feel the swallowing movement on the tube if reflex is present.)
30. Advantages and disadvantages of open method of administration of anesthetic agent.(Open method is applicable to volatile anesthetic, less expensive, require minimal

equipment, relatively free access to air, disadvantages-free movement of gas is impaired by gauze , little knowledge of concentration of anesthetic vapor, wastage,.)

31. Colloidal theory of anesthesia.(proposed by Claud Bernard in 1875, aggregation of colloid in nerve cell causes anesthesia, explain a relation ship between anesthesia and protein precipitation, high protein and lipid solubility served to transport them to the site , they could leave the lipid and combine with protoplasm).

32. Lipid theory of anesthesia,( Meyer and Overton theory).( Proposed direct relationship between affinity of an agent for lipid and its depressant action. Penetration of an agent in to lipid phase of cell results in molecular interaction between agent and lipoproteins. The interaction may then alter the special arrangement of lipoprotein molecules and interfere with ionic exchange or enzymatic activity . this theory express the relationship between potency and relative solubility in oil and water.)

33. Biochemical theory of anesthesia ,( Warberg's theory). (Theory of decreased energy production, narcotics depresses the cellular respiration by getting absorbed on to cell structures and displaces or prevent substrate from enzymatic oxidation. The oxidative metabolism of carbohydrate is blocked by anesthetics, ATP is important for the formation of the acetyl group in the process of acetyl choline synthesis. Opposite view is decreased oxidative metabolism is the results but not the cause of anesthesia.)

34. Clathrates theory of anesthesia,( hydrated microcrystal theory). (Proposed by Pauling .1961. formation of clathrates in the CNS by an anesthetic agent interfere with the ionic mobility , electrical charges, chemical reactions or magnitude of enzymatic activity that contribute in some way to the electrical oscillations involved in consciousness. Formation of clathrates is reversible.)

35. Pre anesthetic medication.(Drugs administered prior(15-45 min) to anesthetic administration-Objectives: minimize undesirable reflexes/autonomic activity-permit smooth, rapid, safe induction-minimize pain-alleviate apprehension-relieve anxiety-facilitate handling-calming the animals-add to the level of sedation-reduce anesthetic requirement-minimize post anesthetic recovery complication-prevent infection. Tranquilizers like phenothiazine derivatives- butyrophenones, Benzodiazepins, hypnotics and sedatives like barbiturates, alpha-2 adrenergic agonist like xylazine, opioid to reduce pain, dissociative drugs like ketamine-parasympatholytics like atropine and glycopyrolate.)

36. Post anesthetic medication.(Anti microbials, Analgesics, Anti emetics, Cholinergic agents, Anti cholinergic agents, Laxatives, Stool softeners, In specific cases reversing agents.)

37. Minimum alveolar concentration.( It is that concentration of inhalant anesthetic agent which prevent gross purposeful movement in 50% of the subject exposed to a supra maximal noxious stimuli . Two times MAC represent deep level of anesthesia. The potency is inversely related to MAC and it is inversely related to oil / gas partition coefficient . A very potent anesthetic agent has low MAC and high oil/ gas partition coefficient.

38. Phenothiazine group of drugs. ( Points-Tranquilizing effect, Anti arrhythmic, Anti histaminic, Anti parasitic, Anti emetic.)

39. Malignant hyperthermia. (A condition seen in case of some anaesthetic agent like halothane, methoxy flurane etc. It is seen in some breeds of swine and horse and in humans. The thermo regulatory mechanism is suppressed, there will be excessive heat production in skeletal muscles as a result of excess release of calcium from the sarcoplasmic reticulum. The body temperature shoot up-associated with muscle contraction and acidosis-if not treated it can be fatal-skeletal muscle relaxants like Dantrolene ( which block calcium channel), phenytoin sodium 1-10 mg/kg i/v also used to prevent this.)

40. Contra indications of Halothane. (Points: Calcium channel blocking drugs, amino glycoside antibiotics, Phenobarbitone, Brain surgery.)

41. Uses of Ethyl alcohol .(points: as a solvent for medicines, ethyl sponges for reducing Body temperature, as an antiseptic, Emergency tocolytic agent, to treat methanol toxicity, for hypnotic effect, dehydrated alcohol injection in to close proximity of nerve or ganglia to relieve long lasting pain in neuralgia/ carcinoma.)

42. Classify benzodiazepines with examples depending on the duration of action.  
1) Slow elimination-Diazepam, Nitrazepam, flurazepam  $\frac{1}{2}$  life 20-100 hrs 2) Rapid elimination-Temazepam, lorazepam  $\frac{1}{2}$  life 10-20hrs 3) Ultra elimination-Oxazolam, Triazolam  $\frac{1}{2}$  hrs 4-5 hrs.

43. Side effects of benzodiazepines. (Points: motor incoordination, Increase reaction time, Impair mental and psychomotor function, confusion, dry mouth and bitter taste, blurred vision, joint pain.)

**Write the mechanism of action of the following :**

1. Broncho dilatation by xanthines. (points: Stimulate the accumulation of cAMP / cGMP, Phosphodiesterase inhibition, Suppresses the release of histamine by mast cells.)
2. Cocaine as a CNS Stimulants. (blocks the dopamine reuptake in to presynaptic nerve terminals resulting in prolonged dopaminergic action of brain pleasure system.)
3. 4-Amino pyridine as an antagonist of CNS depressants. (Facilitate neuronal calcium uptake and enhances Acetyl-choline release, Selectively block Potassium channels in excitable membranes.)
5. Opisthotonus posture in strychnine poisoning. ( Post synaptic inhibition by Renshaw cells are blocked. Hence a single sensory impulse stimulate different motor unit, so simultaneous contraction of flexors & extensors, convulsive posture seen.)
6. Piracetam as a cerebral activator. (Stimulate neuronal metabolism, Stimulate neuronal transmission, Improve ATP/ADP ratio in telencephalon, Improve interhemisphere information transfer.)
7. Lithium carbonate as a mood stabilizer ( It suppress the release of Nor adrenaline and Dopamine in the brain without affecting 5 HT Release, Lithium partially replace body sodium.)
8. Ephedrine. (Direct and indirect action-release of adrenaline and nor adrenaline from the nerve endings- tachyphylaxis.)
9. Action of ethyl alcohol on skin. (vaso dilation, reddening of skin, feeling of warmth.)
10. CNS stimulation of pentylene tetrazol. (Interfere GABA ergic inhibition, direct depolarization of CNS neuron.)
11. Diazepam. (potentiate the neuronal inhibition mediated by GABA.)

**Match each one in 'A' to those in 'B' and 'C':**

A	B	C
1. Halothane	Phenothiazine 8	Codeine 5
2. Xanthenes	Fermentation of molasses-6	Ether anaesthesia 9
3. Ephedrine	Somnothane 1	Laughing gas 12
4. 4 -AP	Supplied in blue cylinders 12	Tachyphylaxis 3
5. Morphine	Formaldehyde 7	Medullary stimulant 11
6. Ethyl alcohol	Smelling salt 11	Multihalogenated ethane 1
7. Methyl alcohol	Purine derivative 2	Analgesic 10
8. Ataractic	Yohimbine 4	Relieve fatigue 2
9. W. T.G.Morton	Alpha 2 agonist 10	Optic nerve damage 7
10. Xylazine	Poppy plant 5	Preanaesthetic 8
11. Ammo. carb	1846 9	Xylazine, ketamine 4
12. Nitrous oxide	<i>Ephedra sennica</i> 3	Antabuse therapy 6

**Match the following:**

A	B
1. Cocaine	Pethidine----17
2. Halothane	Stairing eyes----18
3. Amethocaine	Serpassil----12
4. Nitrous oxide	Catalepsy---18
5. Anethane	Antianxiety---9
6. Sodium salicylate	Saffan---13
7. Ether	Priestly---4
8. Chronobiotic	Inflammable---7
9. Diazepam	Alphaxalone---13
10. Amphetamine	Largactil---20
11. Etorphine	Anticonvulsant---9
12. Rauwolfia	Pentobarbitone--8
13. Althesin	Stored in blue colored cylinders 4
14. MS 222	React with rubber-2.
15. Diphenoxylate	Oxidize vit-B12---4
16. Salol	Malignant hyperthermia--2
17. Meperidine	Theophylline--8
18. Ketamine	Laughing gas--4
19. Acetazolamide	Dantrolene.--2
20. Ataractics	

**Comment and substantiate your views:**

1. Halothane was administered in an animal using closed system of equipment in which rubber and metallic parts are used. Points: ( It is not advisable to use this equipment because Halothane will react with rubber and most metals.)

2. Fishes were transported in sea water under daylight using Tricaine methane sulfonate to immobilize it. ( Points: It is not advisable to keep in sea water and exposed to sunlight when Tricaine methane sulfonate is used as immobilizing agent. Tri..... produce toxicity in fishes kept in salt water in the presence of sunlight.)

3. Nitrous oxide was used to induce anesthesia in an animal with trapped air pockets. (It is not advisable to use in these animals. Because trapped air pocket will expand several times. Nitrous oxide is 34 times more soluble than Nitrogen ,nitrogen is replaced with Nitrous oxide in these air pockets- results in anaesthetic accidents.)

4. Methoxy flurane was administered in an animal using closed system of equipment in which soda lime is used as carbon dioxide absorber. (Not recommended Methoxy flurane will produce a toxic product in presence of sodalime which is dangerous to the life of the animals.)
5. Animal which was undergoing Streptomycin treatment for some disease was anaesthetized with Halothane. (Not proper as both compounds are having `neuromuscular blocking effect.)
6. Trilene was used as an anesthetic agent in a closed circuit system where soda lime is the carbon dioxide absorber. ( not advisable because trichloroethylene in presence of soda lime produce carbonyl chloride which is highly toxic.)
7. Pentobarbitone was used to induce anesthesia in a pregnant dog, which was undergoing a course of chloramphenicol treatment for some infection. (It is not recommended, in pregnant animals it will suppress the respiratory centre of foetus so chances of foetal mortality . Further chloramphenicol treatment and pentobarbitone are contraindicated as chloramphenicol inhibits hepatic microsomal enzymes hence pentobarb. may produce toxicity. )

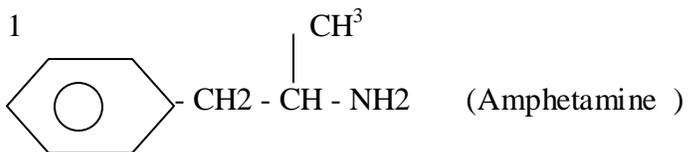
**Explain in detail.(Essays):**

1. Classify psychomotor stimulants with suitable examples- Explain in details- Cortical Stimulants / Medullary stimulants / Spinal cord stimulants.
2. Classify CNS stimulants with examples-Explain in detail Analeptics / Xanthines
3. Classify hypnotics and sedatives with suitable examples for each, Explain non anodyne Hypnotics / Anodyne hypnotics.
4. Classify inhalant general anesthetic with examples, Explain Halothane and Methoxyflurane.
5. Classify injectable general anesthetics give examples, Explain in detail Xylazine –Ketamine anesthesia in dogs.
6. Explain dissociative anesthetics, what are the differences with conventional anesthetics?
7. Explain the different theories explained for general anesthesia?
8. What are the classic stages of inhalant anesthesia explain.?
9. What are the different methods of administration of General anesthetics-with the help of a diagram explain closed method of administration?
10. Classify general anesthetics with examples, Explain the different theories put forth for general anesthesia?
11. What are the different classes of drugs used for pre-anesthetic medication, give examples- Explain Tranquilisers as pre anesthetic medicine?

**Write the dose of the following:**

1. Atropine as a pre anesthetic agent.(0.045 mg/kg)
2. Doxapram for barbiturate suppression in dogs. ( 2mg.kg)
3. Megimide in barbiturate toxicity. (15-20 mg/kg.)
4. Nuxvomica powder in cattle. (2-8 gm.)
5. Chloretone for gastritis in dogs. (130mg.)
6. Tr. Nuxvomica for goats. (1-4 ml.)

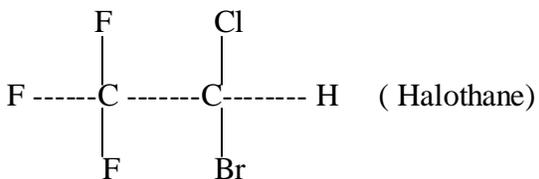
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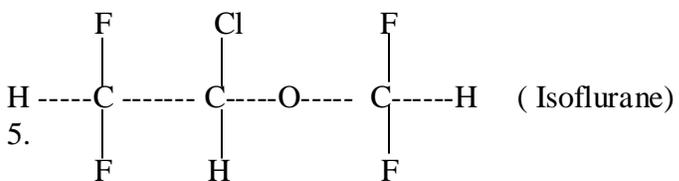
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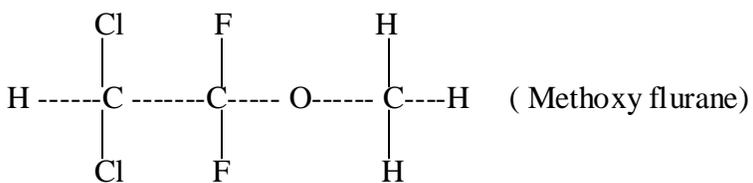
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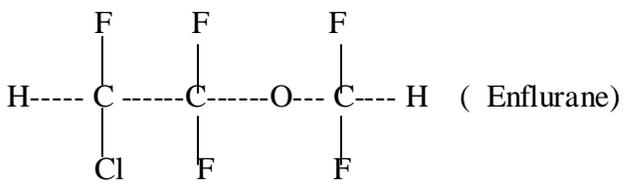
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