

CHEMISTRY

BOOKS - MHTCET PREVIOUS YEAR PAPERS AND PRACTICE PAPERS

CHEMISTRY IN EVERYDAY LIFE

Exercise 1

1. Which of the following statements is not true about the drug barbital?

- A. It is used in sleeping pills
- B. It is a non-hypnotic drug
- C. It is tranquilizer
- D. It causes addiction

Answer: B



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2. Which of the following statements is incorrect?

- A. Some antiseptics can be added to soaps
- B. Dilute solutions of some disinfectants can be used as an antiseptics
- C. Disinfectants are antimicrobial drugs
- D. Antiseptic medicines can be ingested

Answer: D



3.	Substances	which	bring	body	temperature
do	own are knov	vn as :			

- A. analgesic
- B. antibiotic
- C. antipretic
- D. sulpha drugs

Answer: C



4. Bithional is an example of

A. disinfectant antiseptic

B. antiseptic

C. antibiotic

D. analgesic

Answer: A



5. Which of the following is used as a "morning after pill"?

A. Norethindrone

B. Ethinylestradiol

C. Mifepristone

D. Bithional

Answer: C



6.	Which	of the	follov	ving is	bacter	iostatic?
----	-------	--------	--------	---------	--------	-----------

- A. Penicillin
- B. Erythromycin
- C. Amino glycodine
- D. Ofloxacin

Answer: B



7. Which among the following is not an antibiotic?

A. Penicillin

B. Oxytocin

C. Erythromycin

D. Tetracycline

Answer: B



8. Barbituric acid is used as		
A. an antipyretic		
B. an antiseptic		
C. an antibiotic		
D. a tranquilizer		
Answer: D		



A. anaesthetic

B. antidepressant

C. antimalarial

D. analgesic

Answer: B



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10. A drug that is antipyretic as well as analgesic is:

- A. chloroquine
- B. penicillin
- C. paracetamol
- D. chloropromazine hydrochloride

Answer: C



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11. Heart patients can be given

A. monosaturated fatty acid

- B. trans fatty acid
- C. polyunsaturated fatty acid
- D. polysaturated fatty acid

Answer: C



- 12. Which is not true about enzyme inhibitors-
 - A. Prevent the binding of substrate

B. A strong covalent bond is formed

between the inhibitor and enzyme

- C. These can be competitive or noncompetitive
- D. Inhibit the catalytic activity of the enzyme

Answer: B



13. The drug used for the prevention of heart attacks is

- A. aspirin
- B. valium
- C. chloramphenicol
- D. cephalsoprin

Answer: A



14. What are the substances which mimic the natural chemical messengers ?

- A. Antibiotics
- B. Antagonists
- C. Agonists
- D. Receptors

Answer: C



- A. Ibuprofen
- B. Dichlofenac sodium
- C. Naproxen
- D. Ofloxacin

Answer: D



16. The correct structure of the paracetamol is







D. 📝

Answer: D



17. Drug which helps to reduce anxiety and brings about calmnes is :

A. tranquilizer

B. diuretic

C. analgesic

D. antihistamine

Answer: A



18. Which of the following is not an antiseptic drug?

A. Dettol

B. iodoform

C. Gention violet

D. Lindane

Answer: D



19. An ester used as medicine is: A. ethyl acetate B. methyl acetate C. methyl salicylate D. ethyl benzoate

Answer: C



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20. Tincture of iodine is

- A. aqueous solution is $\it l_{
 m 2}$
- B. solution of l_2 in aqueous Kl
- C. alcoholic solution of l_2
- D. aqueous solution of Kl

Answer: C



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21. The safest and the most common alternative of sugar is

- A. glucose
- B. dulcin
- C. cyclodextrin
- D. aspartame

Answer: D



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22. Many people prefer artificial sweeteners over natural sweeteners because

A. calorie intake is less in former than the latter

B. calorie intake is more in former than the latter

C. no role of calorie intake

D. this statement has no partical significance

Answer: A



23. Which of the following will not enhance nutritional value of food ?

- A. Minerals
- B. Artificial sweeteners
- C. Vitamins
- D. Amino acids

Answer: B



24. Match the following and select the correct option from the codes given below.



- B. $egin{array}{ccccc} A & B & C & D \\ 2 & 3 & 1 & 4 \end{array}$
- c. $egin{array}{cccccc} A & B & C & D \ 3 & 2 & 4 & 1 \end{array}$
- D. $egin{array}{ccccc} A & B & C & D \ 1 & 4 & 3 & 2 \end{array}$

Answer: D



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25. Which of the following is not artificial sweetener?

- A. Sucralose
- B. Alitame
- C. Saccharin
- D. Sucrose

Answer: D



26. Which of the following chemicals can be added for sweetening of food item at cooking temperature and does not provide calories?

- A. Sucrose
- B. Glucose
- C. Aspartame
- D. Sucralose

Answer: D



27. Butylated hydroxyanisole (BHA), butylated hydroxy toluene (BHT) are important

- A. antioxidants
- B. antifungal
- C. antibacterial
- D. dyes

Answer: A



28. Acrolein test is positive for		
A. polysaccharides		
B. proteins		
C. oils and fats		
D. reducing sugars		
Answer: C		





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29. Which of the following is pheromone?

- A. Linalool
- B. Disparlure
- C. BHA
- D. Alitame

Answer: B



- **30.** Compound used as a food preservative is
 - A. sodium acetate

- B. sodium propionate
- C. sodium benzoate
- D. sodium oxalate

Answer: C



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31. The reagent(s) used in the preparation of aspirin from salicylic acid is/are

A. $SOCl_2$, pyridine

B. $(CH_3CO)_2O, H^+$

C. CH_3CO_2H , HCl

D. CH_3Cl , $AlCl_3$

Answer: B



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32. Among the following sweeteners which one has the lowest sweetness value?

A. Alitame

- B. Aspartame
- C. Saccharin
- D. Sucralose

Answer: B



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33. Saccharin , an artificial sweetener , is manufactured from

A. toluene

- B. cyclohexane
- C. starch
- D. cellulose

Answer: A



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34. The sweetest artificial sugar among the following is

A. aspartame

- B. sucralose
- C. alitame
- D. sucrose

Answer: C



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35. Which of the following formula represents soap?

A. $C_{17}H_{35}COOH$

B. $C_{17}H_{35}COOK$

C. $C_{15}H_{31}COOH$

 $\mathsf{D.}\, C_{17} H_{35} (COO)_2 Ca$

Answer: B



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36. Glycerol is added to soap. It function:

A. as a filler

B. to increase leathering

- C. to prevent rapid drying
- D. to make soap granules

Answer: C



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37. Transparent soaps are made by dissolving the soap in

- A. methanol
- B. ethanol

- C. propanol
- D. butanol

Answer: B



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38. Compound which is added to soap to impart antiseptic properties _____.

- A. sodium lauryl sulphate
- B. sodium dodecyl benzene sulphonate

C. resin

D. bithional

Answer: D



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39. Which of the following is known as invert soap?

A. Pentaerythritol monostearate

B. Sodium stearyl sulphate

- C. Trimethyl steary ammonium bromide
- D. Ethoxylated nonyphenol

Answer: C



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40. Bithional is generally added to the soaps as an additive to function as a / an

- A. softener
- B. hardener

C. dryer

D. antiseptic

Answer: D



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41. Which of the following process will given soap?

A. Hydrolysis

B. Saponification

- C. Neutralisation
- D. Acidification

Answer: B



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42. The "saponification value " of an oil or fat is measured in term of

A. NH_4OH

B. NaOH

C. KOH

D. C_6H_5OH

Answer: C



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43. The reaction of fat and sodium hydroxide is known as

A. dehydration

B. hydrogenation

- C. saponification
- D. esterification

Answer: C



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- **44.** Which of the following is a germicide also
- ?
- A. Cationic detergent
- B. Anionic detergent

- C. Non-ionic detergent
- D. None of these

Answer: A



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45. Sodium alkyl benzene sulphonate is used as

- A. soap
- B. fertilizer

- C. detergent
- D. pesticide

Answer: C



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- **46.** Hair shampoos belong to which class of synthetic detergents?
 - A. Anionic detergents
 - B. Cationic detergents

- C. Non-ionic detergents
- D. All of these

Answer: B



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- 47. Pick out the statement which is not true?
 - A. Tetrazine is harmful edible colour
 - B. Alitame is an artificial sweetener

- C. Sodium alkyl sulphate is a cationic detergent
- D. The performance of a rocket propellant is measured in terms of specific impulse

Answer: C



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48. Select the detergent that is used to prepare cosmetics.

- A. DDBS
- B. Polyethylene glycol
- C. Cetyltrimethyl ammonium chloride
- D. LAS

Answer: C



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49. Which one of the following forms micelles in aqueous solution above certain concentration?

- A. Urea
- B. Dodecyl trimethyl ammonium chloride
- C. Pyridinium chloride
- D. Glucose

Answer: B



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50. In the following which is soap?

A. CH_3COONa

B. CH_3ONa

C. $C_{17}H_{35}COONa$

D. $C_{17}H_{35}SO_3Na$

Answer: C



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Exercise 2

1. Which artificial sweetener contains chlorine?

- A. Sucralose
- B. Alitame
- C. Aspartame
- D. Saccharin

Answer: A



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2. If the bond between an enzyme and an inhibitor is a strong covalent bond and cannot be broken easily, then

- A. the enzyme is blocked permanently
- B. the body degrades the enzyme inhibitor complex
- C. a new enzyme is synthesised
- D. All of the above

Answer: D



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3. Chemical composition os antacids are give as I. $NaHCO_3$ II. $Al(OH_3)$ III. $Mg(OH)_2$

Which of the above chemical compunds are used as antacids?

A. I and II

B. II and III

C. I and III

D. All of these

Answer: D



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4. Morphine and many of its homologus when administered in medicinal dose produce

A. poisonous effect

B. relief pain and produce sleep

C. Both (1) and (2)

D. no effect

Answer: B



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5. Consider the following satements regarding the treatment with antacids like Al and Mg hydroxide

I. It controls only symptoms of acidity

II. It controls only cause of acidity

III. It is the basic compounds which neutralise

excessive acid of our stomach

Choose the correct statement(s) and select the correct option.

A. Both I and Ill

- B. Both II and III
- C. Only II
- D. All of these

Answer: A



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6. Which of. the following set of reagents are used for preparing paracetamol from phenol?

A. $H_2SO_4, H_2Pd, (CH_3CO)_2O$

B. Br_2/H_2O , Zn/HCl, $(CH_3CO)_2O$

 $\mathsf{C}.\,HNO_3,\,H_2\,/Pd,\,(CH_3CO)_2O$

D. H_2SO_4 , $SnCl_2$ / HCl, $(CH_3CO)_2O$

Answer: C



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7. 🗾

is the structure of Me

A. penicilin K

- B. penicillin V
- C. penicillin G
- D. chloramphenicol

Answer: C



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8. Which of the following is an example of liquid dishwasing detergent?

A.
$$CH_{3}(CH_{2})_{10}-CH_{2}OSO_{3}^{-}Na^{+}$$

C. 🗾

D.
$$\left\lceil CH_3(CH_2)_{15} - egin{array}{c} CH_3 \ dots \ CH_3 \end{array}
ight
ceil_{CH_3}^{CH_3}
ight
ceil^+$$

Answer: B



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9. Which type of drugs come under antimicrobial drugs?

- A. Antiseptics, antibiotics, disinfectants
- B. Tranquilizers, analgesics, antiseptics
- C. Tranquilizers, antiseptics, antifertility
- D. Antiseptics, antacids, antihistamine

Answer: A



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10. Which of the following is na example of non-biodegradable detergent?



В. 🗾

C. 🗾

 $\mathsf{D.}\, CH_3(CH_2)_{10}CH_2OSO_3Na$

Answer: C



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11. Which one of the following compound gives aspirin on reacting with acetic anhydride in presence of H_2SO_4



В. 📝

C. 🗾

D. 🗾

Answer: B



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12. Low level of noradrenaline is the cause of depression. What type of drugs are needed to cure this problem?

- A. Sedatives
- B. Antidepressants
- C. Hypnotics
- D. Psychedic

Answer: B



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13. Select the incorrect statement

- A. Equanil is used to control depression and hypertension
- B. Mifepristone is a synthetic steroid used as "morning after pill"
- C. O.2 per cent solution of phenol is an antiseptic while its 1.0 per cent solution is a disinfectant
- D. A drug which kills the organism in the body is called bacteriostatic

Answer: D

14. Sulpha drugs used as antibiotics are derivatives of

A. benzene sulphonic acid

B. sulphanilic acid

C. sulphanilamide

D. p-amino benzoic acid

Answer: C



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15. The following structure represents



A. sucrose

B. sucralose

C. aspartame

D. alitame

Answer: B



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16. In the following sets of compounds, the one which contains only medicinal compounds is:

A. alizarin, phenacetin, morphine

B. aspirin, gentian violet, phenolphthalein

C. boric acid, chloramphenicol, aspirin

D. 9-oxodecanoic acid, boric acid, morphine

Answer: C



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17. An antibiotic contains nitro group attached to aromatic nucleus in its structure. It is

- A. penicillin
- B. streptomycin
- C. tetracyclin
- D. chloramphenicol

Answer: D



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18. Which of the following statements is correct?

A. Some tranquilizers function by inhibiting the enzymes which catalyse the degradation of noradrenaline

B. Tranquilizers, are non-narcotic drugs

C. Tranquilizers are chemical compunds

that to not affect the message transer

from nerve to receptor

D. Tranquilizers are chemical compounds that can relieve pain and fever

Answer: A



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19. Salvarsan is arsenic containing drug which was first used for the treatment of ____

A. syphilis

B. typhoid

C. meningitis

D. dysentry

Answer: A



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20. The compound that causes general antidepressant action on the central nervous system belongs to the class of ____

A. analgesics

- B. tranquilizers
- C. narcotic analgesics
- D. antihistamines

Answer: B



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21. Aspartame is one of the good artifical sweeteners whose use in limited to col foods and soft drinks because:

- A. it has very low boiling point
- B. it gets dissociated at cooking temperature
- C. it is sweetener at low temperature only
- D. it is insoluble at higher temperature

Answer: B



- **22.** Differentiate between disinfectants and antiseptics .
 - A. antiseptics are used against microorganisms while disinfectants are used against insects
 - B. antiseptics are used only over skin while disinfectants can be taken orally als
 - C. antiseptics merely inhibit the growth and disinfectant kill the microorganisms

D. antiseptics are used over living tissues,

While disinfectants cannot be used over

living tissues

Answer: D



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23. For the preparation of a detergent 'X' from benzene following steps are involved



The sequence of these reactions should be

- A. I, II and Ill
- B. II, I and Ill
- C. II, Ill and I
- D. I, Ill and II

Answer: A



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24. Detergents obtained from LAB are biodegradable. LAB stands for

- A. laboratory tested raw material
- B. low anionic balance
- C. linear alkyl benzene
- D. linear alkyl butyrate

Answer: C



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25. Consider the following reaction



The final product 'Y' is a medicine. Which of the following is incorrect regarding y?

A. It has analgesic as well as antipyretic properties

B. It helps to prevent heart attack

C. It supresses the gastric anomalies

D. It has anti-blood clotting property

Answer: C



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26. The preservative which is ultimately excreted in unne as hippuric acid is

- A. sodium benzoate
- B. sodium metabisulphite
- C. sodium propionate
- D. sodium sorbate

Answer: A



27. Choose the incorrect statement regarding detergents

A. It has non-polar organic part and a polar group

B. It is not easily biodegradable

C. It is sodium salt of fatty acids

D. It is surface active reagent

Answer: C



28. Which of the following can possibly be used as analgesic without causing addiction and modification?

A. Morphine

B. N-acetyt-para-aminophenol

C. Diazepam

D. Tetrahydrocatenol

Answer: B



29. The pH value of gasfric juice in humna stomach is about 1.8 and in intiestine , it is about 7.8. The pk_a value of aspirin is 3.5 Aspirin will be

A. completely ionised in the small intestine and in the stomach

B. unionised in the small intestine and in the stomach

C. unionised in the small intestine and almost unionised in the stomach

D. ionised the stomach and almost unionised in the small intestine

Answer: C



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30. Which of the following is not true for antibiotics?

- A. Tetracycline is one of the broad spectrum antibiotics wtuch 1 s effective against a large number of harmful microorganisms
- B. Streptomycin is highly effective against microorganisms which cause tuberculosis
- C. Penicillin has a narrow spectrum and certain persons are sensitive to it

D. Penicillin may be administered without testing the patients for sensitivity to it

Answer: D



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31. Which of the following statement is false?

A. Some disinfectants can be used as antiseptic at low concentration

B. Sulphadiazine is a synthetic antibacterial

C. Pheromones provide chemical means of establishing communication

D. Norethindrone is a pheromone

Answer: D



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32. The pair whose both species are used in acid medicinal preparation is:

A. $NaHCO_3$ and $Mg(OH)_2$

B. Na_2CO_3 and $Ca(HCO_3)_2$

 $C. Ca(HCO_3)_2$ and $Mg(OH)_2$

D. $Ca(OH)_2$ and $NaHCO_3$

Answer: A



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33. The role of phosphate in detergent powder is to

A. control pH level of the detergent water mixture

B. remove Ca^{2+} and Mg^{2+} ions from the water that causes the hardness of water

C. provide whiteness to the fabrics

D. from solid detergent as phosphate -less detergent are liquid in nature

Answer: B



34. Compound A given below is



- A. antiseptic
- B. antibiotic
- C. analgesic
- D. pesticide

Answer: C



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35. The drug



- A. vasodilator
- B. analgesics
- C. antacid
- D. antiseptic

Answer: A



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36. The reagent(s) used in the preparation of aspirin from salicylic acid is/are

A. $SOCl_2$ pyridine

B. $(CH_3CO)_2O, H^+$

C. CH_3CO_2H , HCl

D. CH_3Cl , $AlCl_3$

Answer: B



37. Match the chemical in List I with their uses in List II.



A.
$$A B C D$$
 $I III III IV$

$$\mathsf{B.} \begin{array}{cccc} A & B & C & D \\ II & III & IV & I \end{array}$$

c.
$$egin{array}{cccccc} A & B & C & D \\ III & I & II & IV \end{array}$$

D.
$$egin{array}{cccccc} A & B & C & D \\ IV & I & II & III \end{array}$$

Answer: C



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38. Which of the following gives paracetamol on acetlylation ?







Answer: D



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- 1. Which of the following is an analgesic?
 - A. Ofloxacin
 - B. Penicillin
 - C. Aminoglycosides
 - D. Paracetamol

Answer: D



2. Butylated hydroxy anisole is a/an

A. antioxidant

B. cleansing agent

C. disinfectant

D. antihistamine

Answer: A



3. Which among the following is a tranquilizer?

A. Aspirin

B. Valium

C. Penicillin

D. Sulphanilamide

Answer: B



4. Which among the following detergents is non-ionic in character?

A. Sodiumlauryl sulphate

B. Pentaerythrityl stearate

C. Cetyltrimethyl ammonium chloride

D. Sodium n-dodecyl benzene sulphonate

Answer: B



- **5.** Antiseptics and disinfectants either kill or prevent growth of microorganisms. Identify which of the following statements is not ture:
 - A. A 0.2% solution of phenol is an antiseptic while 1 % solution acts as a disinfectant
 - B. Chlorine and iodine are used as strong disinfectants
 - hydrogen peroxide are strong

C. Dilute solutions of boric acid and

antiseptics

D. Disinfectants harm the living tissues

Answer: C



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6. Bactericidal antibiotic anoung the following

is:

A. ofloxacin

B. chloramphenicol

- C. erythromycin
- D. tetracycline

Answer: A



- **7.** Antipyretics are used to
 - A. relieve pain
 - B. bring down body temperature
 - C. to kill microorganisms

D. to relieve from anxiety

Answer: B



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8. Chloramine-T is a:

A. disinfectant

B. antiseptic

C. analgesic

D. antipyretics

Answer: B



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- 9. Tranquilisers are also known as
 - A. psychlosomatic drugs
 - B. psychotherapeutic drugs
 - C. psychosystolic drugs
 - D. None of the above

Answer: B

10. $CaCl_2$ is used as

A. disinfectant

B. desiccating agent

C. medicine

D. None of these

Answer: B



11. Fats on alkaline hydrolysis, give

- A. oils
- B. soaps
- C. detergents
- D. glycol + acid

Answer: B

