

DPP - Daily Practice Problems

Chapter-wise Sheets

Date : Start Time : End Time :

CHEMISTRY (CC30)

SYLLABUS : Chemistry in Everyday Life

Max. Marks : 180

Marking Scheme : + 4 for correct & (−1) for incorrect

Time : 60 min.

INSTRUCTIONS : This Daily Practice Problem Sheet contains 45 MCQ's. For each question only one option is correct. Darken the correct circle/ bubble in the Response Grid provided on each page.

- Which of the following is a hypnotic drug?
(a) luminal (b) salol
(c) catechol (d) chemisol
- Phenolic antibacterial used in body deodorants is
(a) 2, 4-Dichlorophenol
(b) p-Chloro-m-xlenol
(c) p-Chlorophenol
(d) p-Nitro-m-xlenol
- Most of the deodorants contain aluminium salts because they
(a) act as antiperspirants
(b) act as anti-bacterial agents
(c) mask body odour
(d) All the these
- An example of a psychedelic agent is
(a) DNA (b) LSD
(c) DDT (d) TN
- Which of the following is a bactericidal antibiotic ?
(a) Ofloxacin
(b) Tetracycline
(c) Chloramphenicol
(d) Erythromycin

RESPONSE GRID

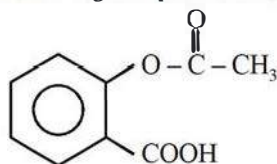
1. (a)(b)(c)(d) 2. (a)(b)(c)(d) 3. (a)(b)(c)(d) 4. (a)(b)(c)(d) 5. (a)(b)(c)(d)

Space for Rough Work

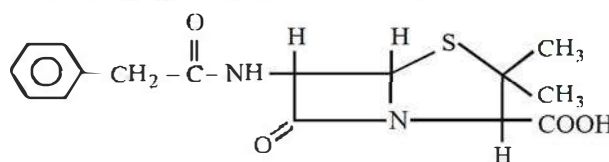
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DPP/ CC30

6. The following compound is used as



- (a) an anti-inflammatory compound
(b) analgesic
(c) hypnotic
(d) antiseptic
7. The substance which is not an artificial sweetener
(a) sucralose (b) alitane
(c) saccharin (d) sucrose
8. Alum is used by dyers for cloth
(a) for fire-proofing fabrics
(b) as first aid for cuts
(c) for softening hard water
(d) as mordant
9. Which of the following compounds is not an antacid?
(a) Phenelzine (b) Ranitidine
(c) Aluminium hydroxide (d) Cimetidine
10. Washing soap can be prepared by saponification with alkali of which of the following oil
(a) Rose oil (b) Paraffin oil
(c) Groundnut oil (d) Kerosene oil
11. The cationic detergent that is used in hair conditioners is
(a) sodium dodecylbenzene sulphonate
(b) sodium lauryl sulphate
(c) tetramethylammonium chloride
(d) cetyltrimethyl ammonium bromide
12. Which of the following is not true?
(a) Some disinfectants can be used as antiseptics
(b) Sulphadiazine is a synthetic antibacterial
(c) Aspirin is analgesic as well as antipyretic
(d) Polystyrene is used to make non-stick cookware
13. Which artificial sweetener contains chlorine?
(a) Sucralose (b) Alitane
(c) Aspartame (d) Saccharin
14. Which one of the following is used as Antihistamine?
(a) Omeprazole (b) Chloranphenicol
(c) Diphenhydramine (d) Norethindrone
15. Commonly used antiseptic 'Dettol' is a mixture of
(a) *o*-chlorophenoxylenol + terpineol
(b) *o*-cresol + terpineol
(c) phenol + terpineol
(d) chloroxylenol + terpineol
16. Which of the following ceramics possesses good strength, translucency and very low porosity
(a) whiteware (b) earthenware
(c) stoneware (d) bricks and tiles
17. Various phenol derivatives, tincture of iodine (2–3%) I₂ in (water / alcohol) and some dyes like methylene blue are
(a) antiseptics (b) disinfectants
(c) analgesics (d) antipyretics
18. Bithional is an example of
(a) disinfectant (b) antiseptic
(c) antibiotic (d) analgesic
19. The structure given below is known as




- (a) Penicillin F (b) Penicillin G
(c) Penicillin K (d) Ampicillin
20. Chemical substances used by insects for communication are called
(a) pheromones (b) hormones
(c) enzymes (d) nucleoproteins

RESPONSE
GRID

- | | | | | |
|---------------------|---------------------|---------------------|---------------------|---------------------|
| 6. (a) (b) (c) (d) | 7. (a) (b) (c) (d) | 8. (a) (b) (c) (d) | 9. (a) (b) (c) (d) | 10. (a) (b) (c) (d) |
| 11. (a) (b) (c) (d) | 12. (a) (b) (c) (d) | 13. (a) (b) (c) (d) | 14. (a) (b) (c) (d) | 15. (a) (b) (c) (d) |
| 16. (a) (b) (c) (d) | 17. (a) (b) (c) (d) | 18. (a) (b) (c) (d) | 19. (a) (b) (c) (d) | 20. (a) (b) (c) (d) |

Space for Rough Work

21. Aminoglycosides are usually used as:
 (a) antibiotic (b) analgesic
 (c) hypnotic (d) antifertility
22. Which type of detergent is formed when stearic acid reacts with polyethylene glycol?
 (a) Cationic detergent (b) Anionic detergent
 (c) Non-ionic detergent (d) None of these
23. Which of the following statements are correct?
 (i) Before 1970 for treatment of stomach acidity $\text{Al}(\text{OH})_3$ is a better antacid in comparison to NaHCO_3 .
 (ii) Discovery of cimetidine was a major break through in the treatment of hyperacidity.
 (iii) Terfenadine is a drug which competes with histamine for binding sites of receptor.
 (iv) Antidepressant drugs like equanil inhibit the enzymes which catalyze the degradation of noradrenaline.
 (v) Veronal and luminal belongs to the class of tranquilizers called barbiturates.
 (a) (i), (ii) and (iii) (b) (i), (iii) and (v)
 (c) (ii), (iii) and (iv) (d) (ii), (iv) and (v)
24. Detergents are prepared by the action of H_2SO_4 on which of the following?
 (a) Cholesterol (b) Lauryl alcohol
 (c) Cyclohexanol (d) *p*-Nitrophenol
25. Which of the following statements about aspirin is **not** true?
 (a) It is effective in relieving pain.
 (b) It is a neurologically active drug.
 (c) It has antiblood clotting action.
 (d) It belongs to narcotic analgesics.
26. Parathion is
 (a) an organic phosphorus compound
 (b) chlorinated aromatic compound
 (c) chlorinated aliphatic compound
 (d) benzene derivative
27. Which of the following add nutritive value to food?
 (a) Sweeteners (b) Antioxidants
 (c) Fat emulsifiers (d) None of these
28. Which one of the following compounds is an anti-fertility drug?
 (a) Aspirin (b) Chloromycetin
 (c) Saheli (d) Penicillin
29. Which of the following represents a synthetic detergent?
 (a) $\text{C}_{15}\text{H}_{31}\text{COOK}$
 (b) $\text{CH}_3[\text{CH}_2]_{16}\text{COONa}$
 (c) $\text{C}_{12}\text{H}_{25}$  SO_3Na
 (d) None of these
30. Sulphonamides act as
 (a) Antiseptic (b) Analgesic
 (c) Antimicrobials (d) Antipyretic
31. Which of the following compound is an antioxidant?
 (a) BHA (b) DDB
 (c) ABS (d) CFRP
32. Which of the following statements are correct?
 (i) Antiseptics are not ingested like antibiotics.
 (ii) 1% solution of iodine in alcohol-water mixture is known as tincture of iodine.
 (iii) SO_2 in low concentrations are used as antiseptics whereas in higher concentration are used as disinfectants.
 (iv) Birth control pills essentially contain a mixture of synthetic estrogen and progesterone derivatives.
 Which of the following is the correct code for the statements above?
 (a) (i) & (iii) (b) (ii) & (iv)
 (c) (i) & (iv) (d) (iii) & (iv)

**RESPONSE
GRID**

- | | | | | |
|---------------------|---------------------|---------------------|---------------------|---------------------|
| 21. (a) (b) (c) (d) | 22. (a) (b) (c) (d) | 23. (a) (b) (c) (d) | 24. (a) (b) (c) (d) | 25. (a) (b) (c) (d) |
| 26. (a) (b) (c) (d) | 27. (a) (b) (c) (d) | 28. (a) (b) (c) (d) | 29. (a) (b) (c) (d) | 30. (a) (b) (c) (d) |
| 31. (a) (b) (c) (d) | 32. (a) (b) (c) (d) | | | |

Space for Rough Work

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DPP/ CC30

33. Arsenic containing medicine used for the treatment of syphilis, is
 (a) erythromycin (b) ofloxacin
 (c) tetracycline (d) salvarsan
34. Artificial sweetner which is stable under cold conditions only is :
 (a) Saccharine (b) Sucralose
 (c) Aspartame (d) Alitame
35. Zinc salts used in deodorants act as
 (a) antiperspirants and astringents
 (b) astringents as well as antiseptics
 (c) antibacterials as well as antiperspirants
 (d) antiperspirants and antiseptics
36. Synthetic detergents are more effective in hard water than soaps because
 (a) they are non-ionic
 (b) their Ca^{++} and Mg^{++} salts are insoluble in water
 (c) their Ca^{++} and Mg^{++} salts are water soluble
 (d) they are highly soluble in water
37. An antibiotic with a broad spectrum
 (a) Kills the antibodies
 (b) Acts on a specific antigen
 (c) Acts on different antigens
 (d) Acts on both the antigens and antibodies
38. Which of the following is an analgesic?
 (a) Novalgin (b) Penicillin
 (c) Streptomycin (d) Chloromycetin
39. Which one of the following types of drugs reduces fever ?
 (a) Tranquiliser (b) Antibiotic
 (c) Antipyretic (d) Analgesic
40. Antiseptics and disinfectants either kill or prevent growth of microorganisms. Identify which of the following statements is **not true**:
 (a) Chlorine and iodine are used as strong disinfectants.
 (b) Dilute solutions of Boric acid and Hydrogen Peroxide are strong antiseptics.
 (c) Disinfectants harm the living tissues.
 (d) A 0.2% solution of phenol is an antiseptic while 1% solution acts as a disinfectant.
41. A medicine which promotes the secretion of urine is called
 (a) Urtic (b) Monouretric
 (c) Diuretic (d) Triuretic
42. Saccharine contains
 (a) C and H (b) C, H, N and O
 (c) C, H, N, O & S (d) C, O and H
43. Which one of the following can possibly be used as analgesic without causing addiction and mood modification ?
 (a) Diazepam
 (b) Morphine
 (c) N-Acetyl-para-aminophenol
 (d) Tetrahydrocannabinol
44. Which one of the following is employed as a tranquilizer drug?
 (a) Promethazine (b) Valium
 (c) Naproxen (d) Mifepristone
45. Match List I with List II and select the correct answer using the codes gives below the lists :
- | List I | List II |
|---------------------------|----------------|
| I. Iodoform | A. Anaesthetic |
| II. Methyl salicylate | B. Antiseptic |
| III. Diethyl ether | C. Insecticide |
| IV. Hexachlorocyclohexane | D. Detergent |
| | E. Pain balm |
- Codes :
 (a) I-B, II-E, III-C, IV-D (b) I-D, II-B, III-A, IV-C
 (c) I-B, II-E, III-A, IV-C (d) I-C, II-A, III-D, IV-B

**RESPONSE
GRID**

33. (a) (b) (c) (d)	34. (a) (b) (c) (d)	35. (a) (b) (c) (d)	36. (a) (b) (c) (d)	37. (a) (b) (c) (d)
38. (a) (b) (c) (d)	39. (a) (b) (c) (d)	40. (a) (b) (c) (d)	41. (a) (b) (c) (d)	42. (a) (b) (c) (d)
43. (a) (b) (c) (d)	44. (a) (b) (c) (d)	45. (a) (b) (c) (d)		

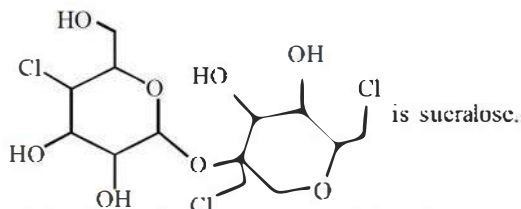
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DAILY PRACTICE PROBLEMS

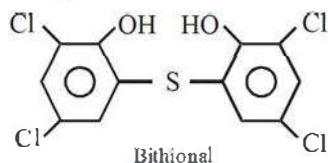
CHEMISTRY SOLUTIONS

DPP/CC30

- (a) These drugs induce sleep and are habit forming common example of hypnotic drugs are Luminal and Saconal.
- (b) p-chloro-m-xyleneol is phenolic antibacterial deodorants.
- (b) Aluminium salts present in deodorants act as antibacterial agents.
- (b)
- (a) Bactericidal are the drugs that kills bacteria. Ofloxacin works by stopping the growth of bacteria. This antibiotic treats only bacterial infections.
- (b) It is acetyl salicylic acid i.e., aspirin, analgesic and antipyretic.
- (d) Sucrose is natural sweetner.
- (d)
- (a) Phenelzine is an antidepressant, while others are antacids.
- (c) Any oils which are good for eating or cooking, can be used in making soap. One of the best is said to be coconut oil. Groundnut, Shea butter, Cocoa butter, Sun flower and many other vegetable oils are also used.
- (d) Cetyltrimethyl ammonium bromide possess germicidal properties. Thus it is used as a cationic detergent in hair conditioners.
- (d)



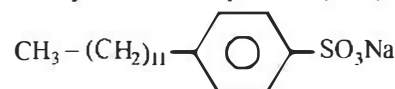
- (c) Diphenhydramine is used as antihistamine.
- (d) The mixture of chloroxylenol and terpenol is dettol which is used as antiseptic.
- (a) Whiteware possesses good strength, translucency, and low porosity.
- (a) Antiseptic drugs cause destruction of micro-organism that produce septic disease e.g. Dettol, Savlon, Boric acid, Phenol, Iodolorm, KMnO_4 and some dye such as methylene blue, gentian violet.
- (b) Bithional is a well known antiseptic, added in soaps to reduce odours produced by bacterial decomposition of organic matter of skin.



- (b) It is the known structure of Penicillin G
- (a) Pheromones are the chemical substances used by insects for communication.
- (a) The aminoglycosides are among the oldest antibiotics.
- (c) Non-ionic detergent is formed when stearic acid reacts with polyethylene glycol.
- (b) For statement (ii), drug which brings major change in the treatment of hyperacidity was histamine. For statement (iv), antidepressant drugs like iproniazid and phenelzine inhibit the enzymes which catalyse the

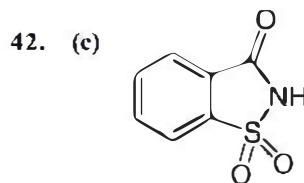
degradation of noradrenaline when the enzyme is inhibited, this important neurotransmitter is slowly metabolised and can activate its receptor for longer periods of time, thus counteracting the effect of depression.

- (b)
- (d) Aspirin is a non-narcotic analgesic.
- (a)
- (d) Neither any of the substances among given options possess nutritive value.
- (c) The antifertility drugs are those chemical compounds which prevent pregnancy in woman. These drugs control the menstrual cycle and ovulation and so used as birth control drug or contraceptives.
- (c) The most widely used domestic detergent is the sodium dodecyl benzene sulphonate (SDS).



(Sodium dodecyl benzene sulphonate)

- (c) Sulphonamides act as antimicrobials.
- (a) Butylated hydroxy anisole (BHA) is an antioxidant.
- (c) For statement (ii), 2-3% solution of iodine in alcohol water mixture is known as tincture of iodine. For statement (iii), SO_2 in very low concentrations are used as disinfectants.
- (d)
- (c) Aspartame is stable under cold conditions.
- (b) Zinc salts in deodorants act as astringents and antiseptics.
- (c) Structural features of soaps and detergents are almost same except that the polar end in detergents is $-\text{OSO}_3^-\text{Na}^+$ while in soaps polar end is $-\text{COO}^-\text{Na}^+$. Detergents have an advantage over soaps that its polar end sulphate and sulphonate retain their efficiency in hard water, since the corresponding Ca and Mg salts are soluble. Being salts of strong acids, they yield neutral solution, in contrast, to the soaps, which being salts of weak acids yield slightly alkaline solutions.
- (c) Broad spectrum antibiotics act on different antigens.
- (a) Novalgin is most widely used as analgesic. Analgesics are pain relieving.
- (c) An antipyretic is a drug which is responsible for lowering the temperature of the feverish organism to normal but has no effect on normal temperature states.
- (b) Dilute solutions of boric acid and hydrogen peroxide are weak antiseptics.
- (c)



Saccharine

- (c) We know that N-acetyl-para-aminophenol (or paracetamol) is an antipyretic which can also be used as an analgesic to relieve pain.
- (b)
- (c)