**T.Y. B.PHARM. SEM VI PHARMACOLOGY III R-2019 Syllabus**

**AY 2021-22 QUESTION BANK**

1. Which of the following drugs forms a protective coat and protects the gastric mucosa from pepsin, pectic acid, and bile salts?

1. Cimetidine
2. Proglumide
3. **Sucralfate**
4. Misoprostol

2. Gynaecomastia is a side effect of:

1. **Cimetidine**
2. Pirenzepine
3. Omeprazole
4. Carbenoxolone

3. A long-acting beta-agonist used to treat COPD is:

1. Atropine
2. **Salmeterol**
3. Ipratropium
4. Beclomethasone

4. Montelukast inhibits which receptors ?

1. Histamine
2. **Leukotriene**
3. PAF
4. Bradykinin

5. A macrolide antibiotic prolonging the QT interval is:

1. **Clarithromycin**
2. Tetracycline
3. Chloramphenicol
4. Vancomycin

6. A drug used for the treatment of organophosphorus poisoning is:

1. Parathion
2. Malathion
3. **Pralidoxime**
4. Phenytoin

7. British anti lewisite is used as an antidote for:

1. **Arsenic poisoning**
2. Silver poisoning
3. Mercury poisoning
4. Lead poisoning

8. Which of the following is an example of infradian cycle?

1. Sleep
2. Hunger
3. Micturition
4. **Menstruation**

9. Melatonin plays a role in:

1. **Sleep cycle**
2. Hunger
3. Digestion
4. Growth

10. Corticosteroid therapy is given as:

1. **High doses in the morning followed by low dose in the night**
2. High doses in the morning followed by low dose in the afternoon
3. Low doses in the morning followed by high dose in the afternoon
4. High doses in the morning followed by high dose in the afternoon

11. Which of the following drugs belongs to the macrolides class?

1. Neomycin
2. Doxycycline
3. **Erythromycin**
4. Cefotaxime1.

12. Which of the following drugs is penicillinase resistant:

1. **Oxacillin**
2. Amoxicillin
3. Bicillin-5
4. Penicillin G

13. Cephalosporines are drugs of choice for treatment of:

1. Gram-positive microorganism infections
2. Gram-negative microorganism infections
3. **Gram-negative and gram-positive microorganism infections, if penicillins have no effect**
4. Only bacteroide infections

14. The following measures are necessary for prevention of sulfonamide precipitation and crystalluria:

1. Taking of drinks with acid pH
2. **Taking of drinks with alkaline pH**
3. Taking of saline drinks
4. Restriction of drinking

15. The mechanism of methylxanthine action is:

1. **Inhibition of the enzyme phosphodiesterase**
2. Beta2 -adrenoreceptor stimulation
3. Inhibition of the production of inflammatory cytokines
4. Inhibition of M-cholinoreceptors

16. The drug used primarily for opioid poisoning is

1. British anti lewisite
2. Thiopental sodium
3. **Naloxone**
4. D-penicillamine

17. The drug oxymetazoline functions by:

1. Dialating the blood vessels on the human nasal mucosa
2. Increasing nasal mucosal blood flow, edema, and airflow resistance
3. Activation of α1-adrenoceptors in the arterioles of the nasal mucosa
4. **Vasoconstricting the respiratory microvasculature on the human nasal mucosa**

18. HMG-CoA reductase inhibitor that is not administered between the evening meals and sleep.

1. **Atorvastatin**
2. Simvastatin
3. Rosuvastatin
4. Pravastatin

19. Sub-acute toxicity occurs between:

1. 07-30 days
2. **14-40 days**
3. 14-90 days
4. 07-49 days

20. Hyperkeratosis and rain drop pigmentation are seen in which of the following poisonings?

1. Lead
2. Mercury
3. Platinum
4. **Arsenic**

21. Carcinogenicity due to cigarette smoking is an example of :

1. Acute toxicity
2. **Chronic toxicity**
3. Sub-acute toxicity
4. Sub-chronic toxicity

22. A drug used for influenza A prevention is

1. **Rimantadine**
2. Acyclovir
3. Saquinavir
4. Foscarnet

23. Which of the following drugs can induce peripheral neuropathy and oral ulceration?

1. **Zalcitabine**
2. Acyclovire
3. Zidovudine
4. Saquinavir

24**.** A 5-lipoxygenase (5-LOX) inhibitor used for the treatment of asthmais:

1. **Zileuton**
2. Montelukast
3. Sodium Cromoglycate
4. Ipratropium bromide

25. Mechanism of action of levamisole is

1. **Increase the number of T-cells**
2. Inhibits CD3 receptor
3. Complement-mediated cytolysis of T lymphocytes
4. Substitution for patient's deficient immunoglobulins

26. Clinical uses of interferons are for:

1. **Cancer treatment**
2. Malaria treatment
3. Multiple sclerosis treatment
4. Parasite infection treatment

27. A polypeptide drug used in treatment of multiple sclerosis is

1. Fingolimod
2. **Glatiramer Acetate**
3. Pentostatin
4. Leflunomide

28. Thalidomide brings about immunostimulation through

A**. Enhanced cytokine production - IL-2 , INF γ**

B. By suppressing inflammatory mediators such as IL-2 , INF γ

C. B cell mediated cytotoxicity

D. Action on TNF- α

29. A stimulant of the CTZ is

1. **Morphine**
2. NaCl
3. Ipecaunha
4. Digitalis

30. An anticholinergic drug used in the treatment of asthma is

1. Montelukast
2. Salbutamol
3. Theophylline
4. **Tiatropium bromide**

31**.** A treatment for opioid poisoning is

1. Naltroxone
2. Nalorhine
3. **Naloxone**
4. Nambutone

32. The risk of asthmatic attacks is higher at

1. **4.00 am-5.00 am**
2. 5.00pm-6.00 pm
3. 11.00 am-12 noon
4. 11.00 pm -12.00 am

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35. The drug fenfluramine acts by:

A. Decreasing serotonin levels

**B. Releasing serotonin by disrupting its vesicular storage**

C. Increasing reuptake of serotonin

D. Stimulating the hypothalamus to release norepinephrine

36. Cisapride enhances the gastrointestinal motility by:

A. Activating muscarinic M3 receptor

B. Blocking dopamine D2 receptor

**C. Activating serotonin 5-HT4 receptor**

D. Inhibiting adrenergic beta-2 receptor

37. **What is meant by antibiotic resistance?**

A. **It means the bacteria have developed resistance for the antibiotic**

B. It means our body has become resistant to the antibiotic

C. It means that the antibiotic concentration has to be elevated

D. It means that our body has become resistant to the antibiotic’s side effects

38. A typical side effect of penicillins is:

1. Cardiotoxicity
2. Neurotoxicity
3. Ototoxicity
4. **Anaphylactic shock**

39. Cotrimoxazole is a combination of:

A. Sulphadoxine + Trimethoprim

B. Sulphamethoxazole + Pyrimethamine

C. **Sulphamethoxazole + Trimethoprim**

D. Sulphamethoxazole + Ictaprim

40. Alteration in DNA gyrase of bacteria will lead to:

1. Increased activity of fluoroquinolones
2. Decreased absorption of fluoroquinolones
3. **Resistance to fluoroquinolones**
4. Toxicity to fluoroquinolones

41. The antimalarial drug chloroquine acts by:

A **Inhibiting heme polymerase**

B Inhibiting DNA-dependant RNA polymerase

C Activating heme polymerase

D Inhibiting schizonts of the parasite

42. The anthelmintic drug piperazine:

A Inhibits tubulin polymerization

B **Acts as a GABA agonist to paralyze the worms**

C Inhibits glucose uptake

D Uncouples oxidative phosphorylation

43. A phenazine dye which is antileprotic and anti-inflammatory is:

A Dapsone

B Ethionamide

C **Clofazimine**

D Rifamycin

44. A side effect of ethambutol is

A Neurotoxicity

B Nausea, vomiting and diarrhea

C Hypersensitivity and urticarial

D **Loss of color vision due to optic neuritis**

45. Daunorubicin is:

A) An inhibitor of cell reproduction by binding irreversibly with the nucleic acids (DNA)

B) **A DNA intercalating agent that block the synthesis of DNA and RNA**

C) An inhibitor of dihydrofolate reductase which is required for thymidine and purine synthesis

D) An inhibitor of thymidylate synthetase and prevents the synthesis of thymidine

46. An antibiotic used in resistant and mixed urinary tract infections for chronic suppressive therapy is:

A **Nitrofurantoin**

B Ampicillin

C Tetracycline

D Clindamycin

47. The immunosuppressant drug sirolimus inhibits the enzyme:

A. Calcineurin

B. **m-TOR**

C. TNF alpha

D. IL-2

48. An anthelmintic which restores depressed immune function of lymphocytes and macrophages is:

A) Tacrolimus

B) **Levamisole**

C) Thalidomide

D) Cyclophosphamide

49. Which of the following are characteristic of acute toxicity?

A) Slowly occurring

B) **Sudden in onset**

C) Slowly changing

D) Persistent over months

50. Mutagenicity refers to:

A) The ability or tendency of some substances to produce cancer

B) The ability of a substance to cause toxicity on DNA/genetic material of a cell

C) The ability of a substance to cause severe fetal damage by crossing the placenta

D**) The induction of permanent transmissible changes in the genetic material of cells**

51. Which of the following compounds inhibit AchE?

A**) Organophosphates**

B) Barbiturates

C) Pyrethroids

D) Ferric chloride

52. The risk of asthma is highest in the early morning due to:

A) Highest concentration of cortisol in the morning

B) **Nocturnal vagus nerve hyperactivity**

C) Small decrease in bronchi diameter in the day

D) Dominance of beta adrenergic activity

53. Which one of the following is a mast cell stabilizer?

**A.** Zileuton

B. Montelukast

C**. Sodium Cromoglycate**

D. Ipratropium bromide.

54. Which of the following cells are a source of gastric histamine?

1. Kupffer cells.
2. **Enterochromaffin like cell (ECL).**
3. Parietal cells.
4. Epithelial cells.

55. Which of the following is a 5HT-3 antagonist?

1. Domperidone
2. **Alosetron**
3. Dicyclomine
4. Metoclopramide

56. Bromhexine is a:

1. Cough centre suppressant
2. Pharyngeal demulcent
3. **Mucolytic**
4. Bronchodilator

57. Streptomycin inhibits bacterial protein synthesis by binding to:

1. DNA
2. mRNA
3. 50S ribosomal subunit of cell ribosomes
4. **30S ribosomal subunit of cell ribosomes**

58. Ratio of sulphamethoxazole and trimethoprim in cotrimoxazole is:

1. **5:1**
2. 1:5
3. 4:1
4. 1:4

59. The most common adverse effects noted with penicillins are:

1. **Hypersensitivity reactions**
2. Gastrointestinal disturbances
3. Cardiovascular abnormalities
4. Respiratory disturbances

60. The first quinolone isolated as a byproduct of the synthesis of chloroquine and made available for treatment of urinary tract infections was

1. Ciprofloxacin
2. Tamoxifen
3. Bleomycin
4. **Nalidixic acid**

61. A drug used in the treatment of tuberculosis which causes Stevens-Johnson syndrome is:

1. Rifampicin
2. Pyrazinamide
3. **Thioacetazone**
4. Ethionamide

62. Which of the following is triazole class of antifungal drug?

1. Clotrimazole
2. **Fluconazole**
3. Ketoconazole
4. Miconazole

63. Which of the following antimalarial drugs is safe during pregnancy?

1. Chloroquine
2. Primaquine
3. **Proguanil**
4. Amodiaquine

64. Pyrantel pamoate is used in the treatment of:

1. Protozoal infection
2. Amoebiasis
3. **Pinworm infection**
4. Schistosomiasis

65. The antineoplastic agent that is classified as an alkylating agent is:

1. Vincristine
2. Tamoxifen
3. Bleomycin
4. **Busulfan**

66. Triple drug therapy used as immunosuppressant consists of:

1. **Cyclosporine+ Azathioprine+ Prednisolone**
2. Cyclosporine+ Methotrexate+ Prednisolone
3. Tacrolimus+ Methotrexate+ Prednisolone
4. Cyclosporine+ Azathioprine+ Methotrexate

67. Anti-IgE monoclonal antibody used in bronchial asthma is:

1. Mepolizumab
2. **Omalizumab**
3. Keliximab
4. Altrakincept

68. Which of the following is a mechanism for multidrug resistance in cancer chemotherapy?

1. **Decreased activity of DNA repair pathways**
2. Decreased sensitivity of dihydrofolate reductase
3. Increased synthesis of cell surface glycoprotein P-170
4. Increased receptor affinity to the drug

69. The Universal antidote is:

1. BAL
2. Dimercaprol
3. **Activated charcoal**
4. All of the above

70. If the base is changed but the result is the same then it is an example of:

1. **Silent mutation**
2. Missense mutation
3. Nonsense mutation
4. None of the above

71. Cycles shorter than a day are which of the following rhythms ?

1. **Infradian**
2. Circadian
3. Ultradian
4. Circannual

72. Methanol poisoning can be treated by:

1. **Ethanol**
2. Methanol itself
3. Butanol
4. All of above

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| 73. | Beta agonists used in bronchial asthma exert their action by: |
| A | Selective beta 1 agonism |
| B | **Selective beta 2 agonism** |
| C | Nonselective beta 1&2 agonism |
| D | Selective beta 2 antagonism |
| 74. | Which of the following class of drugs is used more in the management of COPD than for asthma? |
| A | Corticosteroids |
| B | **Methylxanthines** |
| C | Anticholinergics |
| D | Leukotriene antagonists |
| 75. | Gynaecomastia can occur as a side effect of: |
| A | Bromocriptine |
| B | **Cimetidine** |
| C | Famotidine |
| D | Levodopa |
| 76. | Which of the following is the first-choice drug for non-steroidal anti-inflammatory drug associated gastric ulcer? |
| A | **Omeprazole** |
| B | Misoprostol |
| C | Ranitidine |
| D | Sucralfate |
| 77. | Acquisition of resistance to one antibiotic conferring resistance to another antibiotic to which the organism has not been exposed is called: |
| A | Partial cross resistance |
| B | **Cross resistance** |
| C | Drug resistance |
| D | Drug tolerance |
| 78. | Which of the following classes of antibiotics inhibit cell wall synthesis of bacteria? |
| A | Aminoglycosides |
| B | **Penicillins** |
| C | Macrolides |
| D | Tetracyclines |
| 79. | Streptomycin binds to which subunit of ribosome? |
| A | **30S** |
| B | 50S |
| C | 60S |
| D | 80S |

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| 80. | Sulphamethoxazole : Trimethoprim combination will be effective with the dose ratio of: |
| A | 9:2 |
| B | 7:3 |
| C | **5:1** |
| D | 1:5 |
| 81. | Which of the following statements best describes isoniazid? |
| A | It is a second line anti-tubercular drug |
| B | The primary mechanism is inhibition of protein synthesis |
| C | **Its metabolism pathway is through acetylation which shows genetic variation** |
| D | The primary mechanism of action is enhancement of protein synthesis |
| 82. | Which of the following antifungal drug inhibits ‘Lanosterol 14-demethylase enzyme? |
| A | Amphotericin B |
| B | Griseofulvin |
| C | **Ketoconazole** |
| D | Nystatin |
| 83. | Which of the following is an angiogenesis inhibitor used for the treatment of cancer? |
| A | **Sunitinib** |
| B | Mechlorethamine |
| C | Hydroxyprogesterone |
| D | Ethinylestradiol |
| 84. | Which of the following is a non-selective anti-viral drug? |
| A | Amantadine |
| B | Nevirapine |
| C | **Interferon alpha** |
| D | Zidovudine |
| 85. | Immuno-suppressant effect of tacrolimus is produced by: |
| A | **Inhibiting Interleukin-2 production** |
| B | Inhibiting cytokine gene expression |
| C | Inhibiting purine synthesis |
| D | Blocking the T-cell surface molecules involved in signalling |
| 86. | Which of the following drugs has anti-cancer activity due to inhibition of proteosomes? |
| A | Mercaptopurine |
| B | Methotrexate |
| C | 5-Fluorouracil |
| D | **Bortezomib** |
| 87. | Which of the following unarmed monoclonal antibodies is useful for the targeted treatment of cancer? |
| A | Mechlorethamine |
| B | **Rituximab** |
| C | Thio-TEPA  D Busulfan |

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| 88. | Which of the following is a Calcineurin Inhibitor? |
| A | **Cyclosporine** |
| B | Methotrexate |
| C | Azathioprine |
| D | Mycophenolate mofetil   |  |  | | --- | --- | | 89. | Which of the following toxicity can occur due to single exposure? | | A | **Acute toxicity** | | B | Sub-acute toxicity | | C | Sub-chronic toxicity | | D | Chronic toxicity | | 90. | Which of the following is a selective antidote for morphine poisoning ? | | A | Fentanyl | | B | **Naloxone** | | C | Codeine | | D | Methadone | | 91. | In lead poisoning involvement of peripheral nerves lead to: | | A | Muscle atrophy | | B | Lead fatigue | | C | Convulsions | | D | **Lead palsy** | | 92. | Class IA antiarrhythmic drugs should be avoided in arsenic poisoning due to risk of: | | A | **Prolongation of QT interval** | | B | Narrowing of PQ interval | | C | Prolongation of PR interval | | D | Narrowing of QT interval | |

**DESCRIPTIVE QUESTIONS**

**UNIT 1**

1. Classify drugs used for the treatment of asthma with examples. Elaborate on mast cell stabilizers

2. Write in details on expectorants and antitussives

3. Classify drugs used for the treatment of ulcers with examples. Briefly describe proton pump inhibitors with their mechanism of action, pharmacokinetics and adverse effects.

4. Write a short note on antiemetics drugs. Describe briefly the neuroleptics.

5. Classify laxatives and purgatives with examples. Give a brief account on bulk forming agents.

6. Discuss the pharmacotherapy of inflammatory bowel disease in detail.

7. Explain in detail drugs used in the pharmacotherapy of bronchial asthma.

8. Classify drugs used in the treatment of constipation with examples. Discuss briefly the pharmacology of osmotic purgatives and diphenylmethanes in detail including their mechanisms of action

**UNIT 2**

1. Give adverse effects of aminoglycosides and sulfonamides

2. Describe antimicrobial agents that interfere with the synthesis and action of folate

3. Write a short note on the quinolone class of antibiotics mentioning examples, mechanism of action, adverse effects and clinical uses.

4. Classify beta lactam antibiotics. Give their mechanism of action. Compare and contrast penicillins with cephalosporins.

5. Discuss various mechanisms by which bacteria acquire resistance against antibiotics.

6. Write a short note on antimicrobial resistance. Add a note on MOA, Adverse effects, and therapeutic uses of Sulphonamides.

7. Write a detailed note on the adverse effects of sulfonamides. Add a short note on cotrimoxazole.

8. Write a note on the mechanism of action of beta lactam antibiotics. How do bacteria acquire resistance to beta lactam antibiotics? Classify penicillins with examples.

**UNIT 3**

1. Classify azole antifungal drugs with examples. Give their mechanism of action, adverse effects and clinical use.

2. Classify antiretroviral drugs with examples. Describe Protease Inhibitors in details.

3. Classify anthelmintic drugs. Give a brief account of the benzimidazole drugs.

4. Discuss about the site of action of antimalarial drugs. Elaborate on the mechanism of action, adverse effects and uses of 4-aminoquinoline drugs

5. Write a note on first line therapy used in tuberculosis. Add a note on the mechanism of action and unwanted effects of rifampicin.

6. Write a note on chemotherapy of amoebiasis

7. Classify first and second line anti-tubercular drugs and give the mechanism of action, adverse effects and therapeutic uses of rifampin.

8. Classify antiretroviral drugs with examples from each category. Discuss mechanism of action and adverse effects of protease inhibitors.

**Unit 4**

1. Write a short note on drugs used against urinary tract infections

2. Explain the therapy of sexually transmitted diseases.

3. Classify anticancer agents. Describe the pharmacology of vinca alkaloids in detail.

4. Classify immunomodulators with examples. Enlist the clinical applications of immunomodulators.

5. Explain how cytotoxic drugs are used as immunosuppressants citing examples of cytotoxic drugs.

6. Classify immunosuppressant drugs. Give TWO examples of each class. Add a note on Calcineurin inhibitors

7. Write a detailed note on the therapeutic management of malignancy.

8. Classify anticancer drugs with examples. Give a detailed account of antimetabolites as anticancer drugs

**UNIT 5**

1. Compare and contrast Acute Toxicity and Chronic Toxicity.

2. Explain mutagenicity and genotoxicity with examples. Compare and contrast between them.

3. Give details on the management of lead, mercury and arsenic poisoning.

4. Explain briefly the chronotherapy of rheumatoid arthritis and diabetes mellitus.

5. Explain the circadian ryhtym with classification. What is biorhythym ? Explain chronotherapy with examples.

6. Describe the symptoms and management of lead and opioid poisoning

7. Define chronopharmacology and give a detailed explanation of anti-asthmatics from chrono-pharmacological point of view.

8. What is chronotherapy? Discuss about chronotherapy for peptic ulcers and diabetes mellitus