

Printing Pages: 2

Paper Code : BP-601T C (SVSU:2021-22/R)

EnrollmentNo.

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B. PHARM
IIIrd YEAR, VIth SEMESTER EXAMINATION
MEDICINAL CHEMISTRY – III (BP601T)

[Time: 3:00 Hours]

[Max. Marks: 75]

I Long Question: Answer Any Two

[10×2=20]

- 1 Discuss Pharmacophore modeling and docking techniques.
- 2 Write down classification of Urinary tract anti-infective agents with the SAR of quinolones.
- 3 Write Down the classification of antifungal agents with the important stated structures.

II. Short Question: Answer any Seven

[5×7=35]

1. Write structure and uses of Cephalosporins.
2. Write down the SAR of beta lactam antibiotic.
3. Write down the SAR of Tetracycline.
4. Write structure and uses of Dapsone.
5. Write structure and uses of Trimethoprim.
6. Write down the SAR of Quinolones.
7. Write structure and uses of Sulfamethoxazole.
8. Write down the SAR of Quinolones.
9. Write down the SAR of Folate Reductase Inhibitor.

III. Objectives Question: Answer All Question

[1×20=20]

1. On the basis of structural classification of macrolide, erythromycin is-
 a.) 13 membered ring b.) 14 membered ring
 c.) 15 membered ring d.) None of these
2. Pharmacophore modeling can be done by-
 a.) ligand based b.) structure-based
 c.) both d.) All of these
3. Method used in lead optimization is used to improve drug characteristics like
 a.) Potency b.) Selectivity c.) Toxicity d.) All
4. Sir Alexander Fleming discovered
 a.) cephalosporines b.) penicillin c.) monobactam d.) All
5. Beta lactam antibiotics are
 a.) cephalosporines b.) penicillin c.) Both d.) None
6. Beta lactam is
 a.) two-membered ring b.) three-membered ring
 c.) Four-membered ring d.) None

7. Beta lactam is
a.) Anitbiotic b.) Insecticide c.) Antiseptic d.) None of these
8. Anthelmintic drugs are used to kill
a.) Worms b.) bacteria c.) fungus d.) virus
9. Benzimidazoles type of anthelmintic drugs are /is
a.) Albendazole b.) Thiabendazole
c.) Mebendazole d.) All
10. Sulfonamides structurally related to
a.) PABA b.) GABA c.) NAG d.) NAM
11. Prontosil is a prodrug of
a.) Sulfonamide b.) sulphones
c.) trimethoprim d.) folate reductase inhibitor
12. Which is the following is the second generation cephalosporin?
a.) Cefaclor b.) Ceftazidime c.) Cephalexin d.) Cefotaxime
13. Regarding mechanism of antiviral drug action-
a.) Zidovudine is a protease inhibitor
b.) Amantadine blocks viral DNA packaging and assembly
c.) Indinavir is a reverse transcriptase inhibitor
d.) Acyclovir inhibits viral DNA synthesis
14. Which of the following inhibits DNA gyrase?
a.) Penicillin b.) Trimethoprim
c.) Chloramphenicol d.) Ciprofloxacin
15. Which of the following is considered to be bacteriostatic?
a.) Penicillin b.) Chloramphenicol
c.) Ciprofloxacin d.) Cefoxitin
16. Ribosomal resistance occurs with
a.) Sulphonamide b.) Penicillin
c.) Fluoroquinolones d.) Macrolides
17. Anti-tubercular agents is used
a.) In helminths b.) In protozoal infection
c.) In tuberculosis d.) None
18. Isoniazid is the example of
a.) Anti-viral agent b.) Anti-malarial agent
c.) Anti-tubercular agent d.) None
19. Para amino salicylic acid is used in
a.) Antiviral drugs b.) Anti-malarial drugs
c.) Anti-tubercular drugs d.) None of these
20. Which one of the following is not a viral infection?
a.) Ebola b.) Influenza c.) Small pox d.) Candida

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B.PHARM
IIIrd YEAR, VIth SEM. EXAMINATION
Pharmacology-III, (BP602T)

[Time: 3:00 Hours]**[Max. Marks : 75]****I. Multiple Choice Questions (MCQ)****[20×1=20]**

1. British anti-lewisite (BAL) is useful in treating poisoning due to all Except?
 (a) Lead (b) Organic mercury (c) Cadmium and Iron (d) Arsenic
2. Which of the following can cause discolouration of teeth in the fetus?
 (a) Lithium (b) Tetracycline (c) Warfarin (d) Isotretinoin
3. Aminoglycosides have the following unwanted side effects:
 (a) Pancytopenia (b) Ototoxicity, Nephrotoxicity
 (c) Hepatotoxicity (d) Irritation of gastrointestinal mucosa
4. Metoclopramide acts as...
 (a) D2 receptor antagonist (b) 5HT3 receptor antagonist
 (c) 5HT4 receptor agonist (d) All
5. Ranitidine acts by inhibiting?
 (a) Histamine (H2) receptor (b) Proton pump
 (c) Prostaglandin receptor (d) cholinergic receptor
6. Which of these is not an immunosuppressant drug?
 (a) Cyclosporine (b) Neomycin (c) Tacrolimus (d) Sirolimus
7. Methotrexate is:
 (a) A purine antagonist (b) A folic acid antagonist
 (c) An antibiotic (d) An alkylating agent
8. The hormone that is secreted to help with sleep is called
 (a) Dopamine (b) Melatonin (c) Serotonin (d) Progesterone
9. Dapsone (DDS) is used for the treatment of:
 (a) Leprosy (b) Tuberculosis (c) Fungal infection (d) none of these
10. Expectorants (mucokinetics) acts by?
 (a) Increasing bronchial secretions (b) reducing the viscosity of bronchial secretions
 (c) Both a and b (d) None
11. The circadian rhythm is a cycle based on at which time period.
 (a) 12-hour (b) 16-hour (c) 24-hour (d) 12 to 24-hour
12. Tetracycline's are:
 (a) Broad spectrum antibiotic (b) Narrow spectrum antibiotic
 (c) Both a and b (d) none
13. Choose the anticancer drug, a pyrimidine antagonist:
 (a) Fluorouracil (b) Mercaptopurine (c) Thioguanine (d) Methotrexate

14. Bactericidal effect is:

(a) Inhibition of bacterial cell division (b) Inhibition of young bacterial cell growth

(c) Destroying of bacterial cells (d) Formation of bacterial cell membrane

15. Cotrimoxazole is a combination of drugs

(a) Sulphonamide + Chloramphenicol (b) Sulphonamide + Lincomycin

(c) Sulphonamide + Trimethoprim (d) Sulphonamide + Tetracycline

16. Ciprofloxacin inhibits the bacterial enzyme

(a) Transpeptidase (b) DNA gyrase

(c) DNA dependent RNA polymerase (d) Dihydrofolate reductase

17. Malaria is caused by

(a) Plasmodium falciparum (b) Plasmodium vivax

(c) Plasmodium malariae (d) All of the above

18. Which one of the following is β -lactamase inhibitor?

(a) Clavulanic acid (b) Sulbactam (c) Tazobactam (d) All

19. Following is the anticancer drug of plant origin:

(a) Dactinomycin (b) Vincristine (c) Methotrexate (d) Procarbazine

20. Which one of the following is the example of antitussives?

(a) Codeine (b) Dextromethorphan (c) Both a and b (d)

Ondansetron

II. Long Answers (Answer 2 out of 3)

[2×10=20]

1. Classify anti-neoplastic agents. Discuss the pharmacology (MOA and ADRs) of methotrexate.

2. Define peptic ulcer and classify antiulcer drugs. Explain the pharmacology (MOA, uses) of omeprazole?

3. Classify antifungal drugs. Discuss the pharmacology of any one drugs used for fungal infection.

III. Short Answers (Answer 7 out of 9)

[7×5=35]

1. Discuss general toxicities with antibiotics?

2. Enumerate General principles of treatment of poisoning?

3. Discuss in brief about mechanism of action and adverse effects of chloramphenicol and tetracyclines.

4. Write short notes on anti-asthmatic Drugs?

5. Write short notes on anti-tubercular drugs?

6. Classify anti-viral drugs and mechanism of action of acyclovir?

7. Write a short note on sulphonamides with their mechanism of action and adverse effects.

8. Drugs for constipation and diarrhea?

9. Discuss uses of expectorants and anti-tussive?

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A (SVSU:2021-22/R)

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B.PHARM

IIIrd YEAR 6th SEM. EXAMINATION

Herbal Drug Technology (BP-603T)

[Time : 3:00 Hours]

[Max. Marks : 75]

Long question: Answer Any Two

[10x2=20]

Q1. Define herbal medicinal. Write a note on herbal drug preparation and Good agricultural practices in cultivation of medicinal plants.

Q2. Give Introduction to Herbal Industry. Write a brief account of plant based industries involved in work on medicinal and aromatic plants in India

Q3. Define herbal Nutraceuticals. Write a note on Health benefits and role of Nutraceuticals in ailments like Diabetes and CVS diseases.

Short question: Answer Any Seven

[7x5=35]

Q1. Write a short note on Good agricultural practices in cultivation of medicinal plants.

Q2. Write health benefits and role of Nutraceuticals in Diabetes.

Q3. Write a short note on garlic and amla as health food.

Q4. Give general introduction to herbal-drug and herb-food interactions.

Q5. Give the definition of: Patent, IPR and Biopiracy

Q6. Give a brief account of plant based industries.

Q7. Write the components of GMP (Schedule – T) and its objectives.

Q8. Write the preparation of ayurvedic formulation Aristas and Asawas.

Q9. Write a short note on Pest and Pest management in medicinal plants.

Objective Questions : Answer all question:

[20x1=20]

Q1. Is Known as father of medicine?

- a. Aristotle b. Dioscorides c. Hippocrates d. Galen

Q2. Cryopreservation is a technique used for

- a. Crystallization of food c. Food packing
b. Seed saving d. Preservation of production of vegetables

Q3. Which statement is true about synthetic drug

- a. They can be patented
b. They are difficult to synthesize
c. They are usually more expensive to produce than natural sources
d. All of these

Q4. How much of the world's population depends on herbal medicines?

- a. 80% b. 60% c. 40% d. 20%

Q5. The ph in soils can be raised by adding

- a. Sand b. Sulphur c. Lime d. Nitrogen

- Q6. Where is National Institute of Siddha located?
a. New Delhi b. Chennai c. Calicut d. Hyderabad
- Q7. Who introduced the Unani system of medicine to India?
a. Chinese b. Arabs c. Japanese d. Portuguese
- Q8. Name an ancient book which describes difficult surgical operations like opening of a brain etc.
a. Celsus b. Bhela Samhita c. Chivaravastu d. Agnivesa Samhita
- Q9. All of the following are the components of foods except ____
a. Carbohydrates b. Proteins c. Vitamins d. Fiber
- Q10. Which of the following are the micronutrients?
a. Vitamins and Minerals c. Proteins and Vitamins
b. Carbohydrates and Fats d. Proteins and Minerals
- Q11. What is the formula for glucose?
a. $C_6H_{12}O_6$ b. $C_6H_6O_{12}$ c. $C_6H_6O_6$ d. $C_{12}H_6O_{11}$
- Q12. In which form body stores glucose?
a. Cellulose b. Starch c. Glycogen d. Carbon
- Q13. Full form of FMHG
a. Fast Moving Horticulture Goods
b. Fast Moving Healthcare Gazed
c. Fast Moving Healthcare Goods
d. Flow Moving Healthcare Goods
- Q14. Full form of DSHEA is
a. Daily Supplement Health and Education Act
b. Dietary Supplement Health and Education Act
c. Dietary supervision Health and Education Act
d. Dietary Supplement home and Education Act
- Q15. Is defined as a food or part of a food that provides medical or health benefits, including the prevention and /or treatment of a disease.
a. Herbal Drug c. Nutraceutical
b. Herb Food d. Herbal Cosmetics
- Q16. This can help on the diagnosis of the genetic basis of a disorder
a. ELISA b. PCR c. ABO blood group d. NMR
- Q17. Which part of ginger is used in cooking or medicine?
a. Rhizome b. Leaf c. Flower d. Buds
- Q18. Zinc pyrithine in shampoo is used as
a. Conditioner b. Cleansing c. Antidandruff agent d. Detergent
- Q19. The following surfactant are used in the preparation of dental preparation
a. Tween80 b. Certitude c. Span 80 d. Sodium lauryl sulphate
- Q20. Depilatories are substance which
a. Removes hair c. Imparts colour to the hair
b. Moisturizers skin d. Remove dirt from skin

B.PHARM
IIIRD YEAR, VITH SEMESTER EXAMINATION
BIOPHARMACEUTICS & PHARMACOKINETICS (CODE-BP604T)
[Time : 3:00 Hours] [Max. Marks : 75]

Q1. Long Question: Answer Any Two.

[10×2=20]

- a. Discuss One compartment open model I.V Bolus in detail.
- b. Explain Michaelis-menton equation in detail.
- c. What is bioavailability? Write the method of determination of bioavailability from plasma method

Q2.. Short Question: Answer any Seven

[5×7=35]

- a) Write mechanism of drug absorption in detail.
- b) Criteria for obtaining valid urinary Excretion data.
- c) Tissue permeability of drug in detail.
- d) Explain Compartment models.
- e) One compartment open model IV Infusion.
- f) Chemical pathway of drug biotransformation.
- g) Phase-I metabolism
- h) Discuss various Factors affecting drug distribution.
- i) Write about Bioequivalence .

Q3. Multiple choice question.(Answer all)

[1×20=20]

- i. If the AUC's of the drug from tablet and solution dosage form are super imposable it implies that
 - a) Tablet and solution dosage form are bioequivalent
 - b) Disintegration is not the rate limiting step in tablet dosage form
 - c.) Absorption of the drug is permeation rate limited
 - d.) All
- ii. Estimate the plasma conc. of drug when 100mg. Is given by IV bolus to a 70kg. Patient having volume of distribution Vd of 42liters
 - a) 2.4mg/l b) 75mg/l c) 240mg/l d) 0.75mg/l
- iii. In which plot reciprocal of Michaelis-Menten equation is used?
 - a) Lineweaver- Burk plot.
 - b) Direct linear plot
 - c) Third graphical method
 - d) None
- iv) AUC represents the
 - a) $t_{1/2}$ of the drug
 - b) Amount of the drug absorbed
 - c) Vd of the drug
 - d) amount of drug excreted in urine
- v. Dissolution can be expressed by which equation-
 - a) Modified Noyes-Whitney's
 - b) Lambert law
 - c) Handerson Hasselbach equation
 - d). None of above

- vi. The cell membrane is _____ in nature.
 a) Impermeable b) Semipermeable
 c) Permeable d) Permeable to only gases
- vii. Which one of these is an example of Enteral Route?
 a) Skin b) IV
 c) Gastrointestinal d) Inhalation
- viii. Which is the major process of absorption for more than 90 percent of drugs?
 a) Facilitated diffusion b) Active transport
 c) Endocytosis d) Passive diffusion
- ix. Which kind of molecules cannot pass through a pore transport?
 a) Low Molecular weight molecules b) Water-soluble drugs
 c) Molecules up to 400 Dalton d) Molecules greater than 400 Dalton
- x. Which one of these is a physicochemical property of Drug substance?
 a) Drug solubility b) Disintegration time
 c) Age of patient d) Dissolution time
- xi. Which cell make up the blood-brain barrier?
 a) Squamous epithelium cells b) Fat cells
 c) Red blood cell d) Endothelial cells
- xii. Which theory takes into account that a thin film is created by the solution of the solid at the solid-liquid interface?
 a) Interfacial barrier model b) Diffusion layer model
 c) Surface renewal theory d) Danckwert's model
- xiii. The maximum amount of solute dissolved in a given solvent under standard conditions of temperature, pressure, and pH is know ____
 a) Dissolution rate b) Intrinsic dissolution
 c) Rate limiting step d) Absolute or intrinsic solubility
- xiv. Which one of the following has a high perfusion rate?
 a) Fat b) Muscle and skin
 c) Lungs and kidney d) Bone
- xv. In equation $X = V_d C$, what does V_d denotes?
 a) Density b) Volume of blood
 c) Volume of body d) The volume of the body fluid in which the drug is getting dissolved
- xvi. In which model compartments are joined in series?
 a) Compartment model b) Catenary model
 c) Physiologic model d) Mammillary model
- xvii. What is the molecular weight of human serum albumin?
 a) 5000 Dalton b) 65,000 Dalton c) 60,000 Dalton d) 75,000 Dalton
- xviii. Which is not a prodrug?
 a) Enalapril b) Levodopa c) Aspirin d) Phenytoin
- xix. Which drugs deposit in hair shafts?
 a) Arsenicals b) Tetracycline
 c) Halogenated hydrocarbons d) Lipophilic drug
- xx. Prodrugs with two active compounds are known as _____
 a) Mixed type prodrugs b) Pro-prodrugs
 c) Bioprecursors d) Mutual prodrug

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B.Pharm**IIIrd YEAR, VIth SEMESTER EXAMINATION****Pharmaceutical Biotechnology, (BP-605T)****[Time : 3:00 Hours]****[Max. Marks : 75]****I. Multiple Choice Questions (MCQ) [20×1=20]**

1. Who recognized genes as the unit of inheritance?
(a) Erwin Chargaff (b) David Baltimore (c) Gregor Mendel (d) Aristotle
2. Both Covalent & Non-Covalent binding is present in-
(a) Adsorption (b) Covalent Binding (c) Membrane Confinement
(d) Entrapment
3. In relation to Biosensor, Urea is an example of-
(a) Analyte (b) Molecule (c) Ion (d) All
4. The carrier Calcium Alginate is used in which method?
(a) Adsorption (b) Covalent Binding (c) Membrane Confinement
(d) Entrapment
5. The 3D structure of protein is studied by-
(a) Titration (b) X-Ray Crystallography (c) IR Studies
(d) Chromatography
6. Protein Engineering involves the change in the sequence of-
(a) DNA (b) Amino acids (c) Nucleic Acids (d) None
7. The recovery of an Extracellular enzyme is-
(a) Easy (b) Tough (c) Neither of them (d) Both
8. The genes & the genetic code is present in-
(a) RNA (b) DNA (c) Mitochondria (d) Ribosomes
9. The change in sequence or grouping of nucleotides is called as-
(a) Protein Engineering (b) Chemical Engineering
(c) Genetic Engineering (d) None
10. The full form of GOI is-
(a) Genes of Initiation (b) Genes of Interest (c) Genes of Ionation (d) None
11. What is the name of First ever cloned sheep produced in 1996?
(a) Julie (b) Martin (c) Dolly (d) Bobby
12. Joining pieces of DNA together is done by-
(a) Restriction Endonuclease (b) DNA Ligase (c) Vector (d) None
13. The immunity in which antibodies are gained from outside is known as-
(a) Natural (b) Passive (c) Both (d) None
14. Restriction Enzymes are believed to be evolved by-
(a) Virus (b) Fungi (c) Bacteria (d) Mold

15. Mutation may occur in-
(a) Initiators (b) Modulators (c) Mutagens (d) All
 16. Which of the following are common Genetic Disorders-
(a) Cystic Fibrosis (b) Down's Syndrome (c) SCID (d) All
 17. How many classes of Immunoglobulins are present?
(a) 2 (b) 5 (c) 8 (d) 12
 18. Fermenters are also known as-
(a) Bioreactors (b) Biomachines (c) Biogenerators (d) None
 19. The full form of MHC is-
(a) Major Histamine Complex (b) Major Histocompatibility complex
(c) Major Hemoglobin Complex (d) None
 20. Name the acid which is used in Cosmetic Industries-
(a) Acetic acid (b) Citric acid (c) Glutamic acid (d) All
- II. Long Answers (Answer 2 out of 3) [2×10=20]**

1. Give a brief introduction of Biotechnology with reference to Pharmaceutical field.
2. What is Genetic Engineering? Give its basic principles.
3. Give a brief account of Hybridoma Technology along with its applications.

III. Short Answers (Answer 7 out of 9) [7×5=35]

1. What is Enzyme Immobilization? Give its applications.
2. What is Cloning? What are their applications?
3. Give the functions & structure of MHC.
4. Give a brief account of PCR.
5. What do you mean by Immunity? Give its types.
6. Give a note on Fermentation & its uses.
7. What is Mutation? Write about its different types.
8. Give the stability & storage conditions of Official Vaccines.
9. What are the different techniques of Fermentation? Explain them.

B. PHARM

IIIrd YEAR VIth SEMESTER, EXAMINATION

Quality Assurance (BP606T)

[Time : 3:00 Hours]

[Max. Marks : 75]

I Long Question : Answer Any Two

[2×10=20]

1. List and explain Q series guidelines of ICH
2. Describe the requirements of organization and personal responsibilities as per schedule M.
3. Explain in detail the quality control test for packaging materials.

II. Short Question: Answer any Seven

[7×5=35]

1. Explain the principles are of TQM.
2. Explain the scope and features of NABL accreditation.
3. Discuss the steps involved in the purchase specification.
4. Write a note on maintenance of stores for raw materials.
5. Give reasons for disqualification of testing facilities in GLP.
6. Explain briefly the protocol for conducting Non-clinical lab studies.
7. What are complaints and how they are evaluated?
8. How do you handle disposal of waste products in pharmaceutical unit..
9. How is the cross contamination prevented in dispensing and production areas.

III. Multiple Choice Question: Answer All

[20x1=20]

1. TQM Stands for :
 - a. Total Quality Management b. Total Quality Management
 - c. Total Quality Measurable d. None of these
2. GLP Means:
 - a. Good Laboratory Protocols b. Good Laboratory Practices
 - c. Good Laboratory Planning d. None of these
3. What does QA and QC stand for:
 - a) Quality Assurance and Queuing Control
 - b) Quality Adjustment and Quality completion
 - c) Quality Assurance and Quality control
 - d) Quality Adjustment and Queuing control
4. Which of the following option is correct regarding QA and QC:
 - a) QC is an integral part of QA b) QA is an integral part of QC
 - c) QA and QC are independent to each other
 - d) QC may or may not depend on QA

5. GCP Means:

- a. Good clinical practice b. Good clinical patient
- c. Good client practice d. none of these

6. Which of the following is an example of QA:

- a) Verification b) Software testing c) Validation d) Documentation

7. Which of the following option involves material and component control?

- A. Quality control B. Feedback
- C. Development of specification D. Quality control

8. Which quality is measured as a foundation of requirement:

- A. Software B. Programmers C. Hardware D. None

9. While setting Quality objective, _____ to be considered.

- A. Material quality B. Feedback
- C. Development of standards D. Customer Satisfaction.

10. Select which option is not true about SQA:

- A. Evaluations to be performed B. Documents that are produced by the SQA team.

C. Audits & reviews to be performed by the team D. None.

11. Control chart is a:

- A. Process monitoring tool B. Process control tool
- C. Both (a) and (b) D. None

12. Software quality assurance consists of which function of management:

- A. Reporting functions B. Auditing functions
- C. both a and b D. None

13. Which of the following is not included in prevention cost:

- A. Formal technical reviews B. Equipment calibration and maintenance
- C. Test equipment reviews D. None

14. Capacity planning is concerned with:

- A. How much labour required B. How many machines required C. None D. Both

15. Process control is carried out:

- A. During production B. Before production.
- C. After production control D. All of the above

16. Total Quality Management (TQM) focuses on

- A. Employee B. Customer C. Both (a) and (b) D. NONE

17. What does QA and QC stand for?

- A. Quality Assurance and Queuing Control
- B. Quality Adjustment and Quality completion
- C. Quality Assurance and Quality control
- D. Quality Adjustment and Queuing control

18. The objective of ISO-9000 family of Quality management is:

- A. Customer satisfaction. B. Employee satisfaction
- C. Skill enhancement D. Environmental issues

19. P-D-C-A stands for

- A. Plan-Do-check-Act B. Plan-Do-correct-Act
- C. Proceed-Do-check-Act D. Proceed-Do-correct-Act

20. Physical dimension of equipment and accessories- comes under which qualification?

- A. Design qualification (DQ) B. Installation qualification (IQ)
- C. Operational qualification D. Performance qualification (PQ)