

Printing Pages : 2

Paper Code: BP-501T

B

(SVSU:2024-25/R)

Enrollment No.

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B. PHARM
3rd Year 5th Semester Examination
MEDICINAL CHEMISTRY – II
(BP501T)

[Time: 3:00 Hours]

[Max. Marks: 75]

I Long Question: Answer Any Two

[10×2=20]

1. Analyze how the chemical structure of Diphenhydramine Hydrochloride influences its side effects?
2. Explain the classification of anti-hypertensive agents based on their structures and describe their uses?
3. Analyze the synthesis of Acetazolamide and explain how its SAR influences its therapeutic use as a diuretic.

II. Short Question: Answer any Seven

[5×7=35]

1. What is the synthesis and structure of Cimetidine, and what are its uses?
2. Explain insulin with classification.
3. Explain synthesis and uses of Benzocaine.
4. Write structure and uses of Diphenhydramine hydrochloride.
5. Define local anesthetics with SAR.
6. How does the structure of Warfarin relate to its anticoagulant activity?
7. What is the structure of Tolbutamide?
8. How Explain synthetic scheme of Procaine, and how does its structure relate to its anesthetic properties?
9. Give preparation and uses of Metformin.

III. Objectives Question: Answer All Question

[20×1=20]

1. Phenol reacts with zinc dust to form
a.) Benzene b.) Alcohol c.) Dimethyl Benzene d.) None of these
2. Omeprazole is used as
a.) PPI b.) antihistaminic c.) Anti-cancer d.) anti-biotic
3. Which one is not a Loop diuretic?
a.) Furosemide b.) Bumetanide c.) Ethacrynic acid d.) Verapamil
4. Aniline is in Nature.
a.) Acidic b.) Alkaline c.) Both a&b d.) None

5. Captopril
 - a.) Inhibits the stimulation of renin production by catecholamines
 - b.) Causes prominent postural hypotension
 - c.) Is a B1 specific blocker
 - d.) none
6. H1 receptor antagonist is.
 - a.) Tolbutamide
 - b.) Diphenhydramine Hcl
 - c.) streptomycin
 - d.) All
7. Which of the following antianginal agent is a calcium channel blocker?
 - a.) Nitroglycerine
 - b.) Quinidine
 - c.) Verapamil
 - d.) None of these
8. Which of the following histamine receptor increase the release of gastric acid?
 - a.) H1 receptor
 - b.) H2 receptor
 - c.) H3 receptor
 - d.) H4 receptor
9. Which is not an example of H1 antagonists.
 - a.) Zolamine
 - b.) Tripeleennamine
 - c.) Doxylamine
 - d.) Cimetidine
10. H1 receptor is located in.
 - a.) Heart
 - b.) smoothmuscles
 - c.) Both a & b
 - d.) None of these
11. Which is an example Anti-arrhythmic Drug
 - a.) Disopyramide phosphate
 - b.) Warfarin
 - c.) Digoxin
 - d.) None
12. Which is an example of Potassium sparing Diuretics
 - a.) Spironolactone
 - b.) Histamine
 - c.) Both a&b
 - d.) None
13. Which is not an example of Corticosteroids
 - a.) Prednisolone
 - b.) L-Thyronine
 - c.) Methimazole
 - d.) Tolbutamide
14. Mechlorethamine is a
 - a.) Alkylating agents
 - b.) H2-antagonist
 - c.) H1-antagonists
 - d.) None
15. What is the full form of SAR?
 - a.) Structure Activity ratio
 - b.) Structure Activity Relationship
 - c.) Both
 - d.) None
16. Which is an example of Antibiotic use in antineoplastic agent.
 - a.) Dactinomycin
 - b.) Doxorubicin
 - c.) Daunorubicin
 - d.) All
17. Which is not an example of H1 antagonists
 - a.) Cimetidine
 - b.) Omeprazole
 - c.) Mechlorethamine
 - d.) None of these
18. Osmotic Diuretics are pharmacologicalagent.
 - a.) Benzoic acid
 - b.) Phenol
 - c.) Chlorobenzoic acid
 - d.) Dichlorobenzoic acid
19. Which of the following carbonic anhydrase inhibitors?
 - a.) Acetazolamide
 - b.) Methazolamide
 - c.) Dichlorphenamide
 - d.) All
20. Phenanthrene is isomer of
 - a.) Anthracene
 - b.) Benzene
 - c.) Phenol
 - d.) None of these

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Paper Code: BP-502T

B

(SVSU:2024-25/C)

Enrollment No.

B.PHARM

IIIRD YEAR, VTH SEMESTER EXAMINATION

Subject: INDUSTRIAL PHARMACY-I

(CODE-BP502T)

[Time : 3:00 Hours]

[Max. Marks : 75]

Q1. Long Question : Answer Any Two

[10×2=20]

- Draw a neat labeled diagram of rotatory punch tablet compression machine and describe its working.
- Explain various components of pharmaceutical aerosols in detail.
- Explain various materials that can be filled in soft gelatin capsules. How will you determine base adsorption of solids and minim per gram factor of solids.

Q2. Short Question: Answer any Seven

[5×7=35]

- Explain evaluation of glass containers.
- Explain the formulation and evaluation of vanishing cream.
- How will you assess the flow properties of powders?
- Describe in brief about formulation and evaluation of shampoos.
- What are various facilities that are to be provided in parenteral section?
- What is the composition of soft gelatin capsule shell?
- Describe manufacturing considerations of liquid orals.
- Enlist and explain various film defects.
- Explain the formulation of sterile dry powders

Q3. Multiple choice question.(Answer all)

[1×20=20]

- Micronization increases----- of solids.
 - Size
 - Surface area
 - Bioactivity
 - Duration of action.
- Water solubility of API is needed for-
 - Formulation development
 - Dissolution into GI fluid
 - Both
 - None of above
- Carr's index is related to
 - Flow property
 - Solubility
 - Partition coefficient
 - All of above
- Pharmaceutical solutions for oral administration are _____ dosage forms.
 - Sterile
 - Non-sterile
 - Both
 - None of above

- e) Microcrystalline cellulose is also called as-
a. Avicel b. Emcocel c. Primogel d. Explotab
- f) -----is not a film defect.
a. Blistering b. Roughness c. Hazing d. Capping
- g) Which one is oil soluble antioxidant ?
a. Tocopherol b. BHA c. BHT d. All of above
- h) Which among the following is not a pharmaceutical sugar
a. Sugartab b. Dipac c. Nutab d. Explotab
- i) Type A gelatin has isoelectric pH of—
a. 4.7 b. 7 c. 9 d. 8
- j. Chlorobutanol belongs to -----class of preservative?
a. Class-I b. Class-II c. Class-III d. Class-IV
- k. The sweetening agent commonly used in chewable tablet formula is
a. Mannitol b. Lactose c. Starch d. SCMC
- l. In sugar coating of tablets sealcoat is done
a. To prevent moisture deposition
b. To round the edge and build tablet size
c. To smoothen the surface
d. None of above.
- m. Smallest size of capsule is represented by number
a. 1 b. 000 c. 5 d. None
- o. In case of softgel capsules, the gel strength of gelatin should be in the range of
a. 150-250 b. 12-80 c. 1500-200 d. Less than 50
- p. When a solution has an osmolarity equivalent to that of blood, it is called--

a. Hypertonic b. Hypotonic c. Isotonic d. All of the above
- q. In nail polish, following polymer is used as a film-former -
a. Nitrocellulose b. Polylactic acid
c. HPMC d. Lactose
- r. Binder solution is used in which type of cosmetic products-
a. Face compacts b. Nail polishes
c. Creams. d. Shampoos
- s. Nomenclature of butane as aerosol propellant is-
a. 11 b. 12 c. A-17 d. A-108
- t. Polyethylene Tetraphthalate is also called as-----
a. Polyester b. Nylon c. Polyethylene d. None
- u. Which of the following material is used as blister packaging material?
a. PVC b. Polyethylene c. Polypropylene d. All of above

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Paper Code: BP-503T

B

(SVSU:2024-25/8)

Enrollment No.

BPHARM

3rd YEAR 5th SEM. EXAMINATION

Pharmacology-II

Subject Code: BP-503T

[Time: 3:00 Hours]

[Max. Marks: 75]

I Objectives Question: Answer All Question**[20×1=20]**

1. Which one is used as an oral hypoglycemics?
a. Chloroquine b. Glibenclamide c. Metformin d. Insulin
2. Duration start from the end of QRS complex to the beginning of T wave indicates
a. ST segment b. PR interval c. QR interval d. QT interval
3. Tick theselective AT1 receptor antagonist category?
a. Amlodipine b. Captopril c. Losartan d. None
4. The most commonadverse effect related with ACE inhibitors.
a. Persistent brassy cough b. Hyperkalaemia
c. Both a and b d. Cinconism
5. JG cells of the kidney secrets ...enzymes that regulate blood pressure.
a. Angiotensinogen b. Aldosterone c. Renin d. Angiotensin
6. Which one of the following drugs is fibrinolytic?
a. Ticlopidine b. Aspirin c. Streptokinase d. warfarin
7. Diastolic depolarization in nodal tissue mainly due intracellular movement of which ions?
a. Ca ions b. K ions c. Na ions d. Cl ions
8. Which one of the following is prostaglandins analogue?
a. Misoprostol b. Pantoprazole c. Propanthiline d. Dopamine
9. Drug which increases the absorption of iron from intestine?
a. Cyanocobalamin b. ascorbic acid
c. folic acid d. erythropoietin
10. Congestive heart failure occurs due to
a. Systolic dysfunction b. Diastolic dysfunction
c. Both a & b d. None
11. Select which one of the following is potassium sparing diuretic?
a. Furosemide b. Spironolactone c. Indapamide d. Captopril
12. The vitamin which is associated with blood coagulation?
a. Vitamin A b. Vitamin K c. Vitamin C d. Vitamin D

13. Select high ceiling diuretic?
a. Thiazide b. Mannitol c. Metolazone d. Furosemide
 14. Following drugs stimulate erythropoiesis except.
a. Vitamin B12 b. Folic acid c. Methotrexate d. Iron dextran
 15. What is the precursor of steroid hormone?
a. Protein b. Cholesterol c. Carbohydrate d. Lipid
 16. Select the drug belonging to antagonists of heparin:
a. Aspirin b. Dicumarol
c. Protamine sulfate d. Dalteparin
 17. Tick the specific DPP-4 inhibitor?
a. Vildagliptin b. Sitagliptin c. Both d. Levodopa
 18. In action potential graph which represents rapid depolarization?
a. Phase 1 b. Phase 0 c. Phase 2 d. Phase 4
 19. Tick, xanthine oxidase inhibitor.
a. Allopurinol b. Xanthine c. Colchicine d. Clomipramine
 20. T waves in electrocardiogram represents.
a. Atrial repolarization b. Atrial depolarization
c. Ventricular repolarization d. Ventricular depolarization
- II. Short Question: Answer any seven** [7×5=35]
1. Classify antianginal drugs and explain pharmacology of glyceryl trinitrate.
 2. Explain the pharmacology of HMG-CoA reductase inhibitors.
 3. Describe plasma volume expander with example.
 4. Discuss the therapeutic classification of anti-arrhythmics.
 5. Describe in brief about hormonal contraceptives.
 6. Make a brief note discuss on oral hypoglycemics.
 7. Explain mechanism of action and uses of warfarin and classify anticoagulants.
 8. Classify diuretics and discuss the mechanism of action and uses of furosemide.
 9. Organize anti-gout medications into different categories. Discuss the mechanism of action of anti-gout medication.

- III. Long Question: Answer Any Two** [10×2=20]
1. Describe the biosynthesis of eicosanoids and explain the pharmacological actions of prostaglandin.
 2. Define cardiac glycosides and explain pharmacology of digitalis in details.
 3. Classify anti-rheumatics and explain pharmacology of colchicine.

Printing Pages : 2

Paper Code: BP-504T

A

(SVSU:2024-25/C)

Enrollment No.

B.PHARM

IIIrd YEAR (5th sem.) EXAMINATION

Pharmacognosy and Phytochemistry II (BP-504T)

[Time : 3:00 Hours]

[Max. Marks : 75]

Long question: Answer Any Two

[10x2=20]

- Q1. Explain principle and working of gas chromatography with the help of diagram/HPTLC
- Q2. What do you understand by Biogenetic Investigation? Write a note on TLC.
- Q3. Write Isolation, Identification and Analysis of Phytoconstituents of any three.
a) Menthol b) Glycyrrhetic acid c) Asafoetida d) Atropine e) Caffeine f) Podophyllotoxin

Short question: Answer Any Seven

[7x5=35]

- Q1. Detailed the Pharmacognosy of Vinca/ Digitalis.
- Q2. Elaborate Shikimic acid pathway.
- Q3. Write Isolation, Identification and Analysis of Glycyrrhetic acid/ Rutin.
- Q4. Define extraction. What do you understand by modern methods of extractions? Explain.
- Q5. Write a short note on Caffeine.
- Q6. Discuss Acetate pathway with flow diagram.
- Q7. Classify terpenoids. Write biological source, analysis and uses of drug belongs to terpenoids.
- Q8. Give general introduction, composition, chemistry & chemical classes, biosources, therapeutic uses of Clove/ Aloes
- Q9. Enlist methods and application of Tracer Technique.

Objective Questions: Answer all question:

[20x1=20]

- Which of the following spectroscopy techniques is associated with molecular emission?
 (a) UV-Visible spectroscopy (c) Fluorescence
 (b) IR spectroscopy (d) X-ray diffraction
- Guggul is a.....type of resin
 a) Oleo-gum-resin c) Oleo resin
 b) Glycoresin d) None of the above
- Caffeine + tannic acid
 a) Red ppt c) Black ppt
 b) White ppt d) Yellow ppt
- Artemisinin is used as
 a) Antimalarial c) Analgesic
 b) Antidiabetic d) CNS stimulant

5. Caffeine is
 - a) CNS Stimulant
 - b) CNS Depressant
 - c) both a & b
 - d) none of the above
6. Vinca comes under which alkaloid
 - a) Tropane
 - b) Indole
 - c) Purine
 - d) Quinolone
7. Most of the alkaloids have test
 - a) Sweet
 - b) Sour
 - c) Bitter
 - d) Spicy
8. Soxhlet Apparatus is used for
 - a) Filtration
 - b) Extraction
 - c) Size Reduction
 - d) Isolation
9. Paper chromatography is based on the principle of _____
 - (a) Adsorption
 - (b) Partition
 - (c) Both
 - (d) None
10. The most commonly used Stationary phase in TLC:
 - (a) kieselguhr
 - (b) Silica Gel G
 - (c) Calcium hydroxide
 - (d) Magnesium hydroxide
11. From given list which is most polar solvent
 - a) Methanol
 - (b) Water
 - (c) Hexane
 - (d) Ethanol
12. Sesquiterpenes contain number of Isoprene units:
 - (a) 3
 - (b) 4
 - (c) 5
 - (d) 6
13. From which crude drug Eugenol is isolated?
 - (a) Digitalis
 - (b) Senna
 - (c) Clove
 - (d) Mentha
14. What is solvent used for extraction is called
 - a) Menstrum
 - (b) Marc
 - (c) Extract
 - (d) Solution
15. Identification of drugs based on its taste and smell is
 - (a) Organoleptic evaluation
 - (b) Physical evaluation
 - (c) Chemical Evaluation
 - (d) Microscopical evaluation
16. Peppermint oil is synonym for-
 - (a) Mentha oil
 - (b) Chenopodium oil
 - (c) Cardamom oil
 - (d) Lemon oil
17. Turmeric possess saffron colour due to presence of-
 - (a) Turmerone
 - (b) Curcumins
 - (c) Curcumin
 - (d) Phellandrene
18. In case of ginger which part is used as medicine
 - a) Stem
 - b) Rhizomes
 - c) Leaves
 - d) Bark
19. Substance analyzed in Chromatography is called
 - a) Solvent
 - (b) Eluent
 - (c) Eluate
 - (d) Analyte
20. Caffeine can be isolated from:
 - (a) Coffee beans
 - (b) Tea leaves
 - (c) Both
 - (d) None

[Time: 3:00 hours]

Note: Attempt all questions. Each question carries equal marks.

[Max.Marks:75]

Q1 Attempt All the parts. Choose one correct option.

[20×1=20]

- (i) Minimum age prescribed for registration of Pharmacist is-
(a) 21 (b) 16 (c) 18 (d) 20
- (ii) Biologicals belong to-
(a) Schedule L (b) Schedule C (c) Schedule H (d) Schedule P
- (iii) Medical termination of pregnancy Act was passed in the year-
(a) 1970 (b) 1971 (c) 1973 (d) 1985
- (iv) Drugs and Cosmetics Rules was passed in-
(a) 1964 (b) 1857 (c) 1940 (d) 1956
- (v) Opium straw includes all parts except-
(a) Flower (b) Root (c) Seed (d) Stem
- (vi) Pharmacy council of India is constituted by-
(a) State government (b) Medical Council of India (c) Central government (d) President of India
- (vii) Spurious drugs in study means-
(a) Substitution (b) Imitation (c) Resemble other drugs (d) All of the above
- (viii) Pharmacy Act was passed in the year of-
(a) 1921 (b) 1964 (c) 1948 (d) 1855
- (ix) Drug price control order was passed in-
(a) 1966 (b) 1955 (c) 1979 (d) 1987
- (x) The list of drugs which are exempted from the provisions of import is listed under-
(a) Schedule K (b) Schedule D (c) Schedule P (d) Schedule Y
- (xi) Which of the following is Magic Remedy-
(a) Mantra (b) Kavacha (c) Talisman (d) All of above
- (xii) First pharmaceutical company in India-
(a) Alembic chemical works (b) GlaxoSmithKline (c) Bengal chemicals and pharmaceutical works (d) Sun Pharma
- (xiii) Drug and magic remedies act is extended to whole of India except-
(a) Punjab (b) Arunachal Pradesh (c) J&K (d) Goa
- (xiv) The form no specified to obtain a retail license to sell Schedule C & Schedule C1:
(a) 20 (b) 20A (c) 21 (d) 21A
- (xv) Barbiturates belong to-
(a) Schedule X (b) Schedule P (c) Schedule O (d) Schedule N
- (xvi) Who among the following is not a member of PCI-
(a) The Director General of Health Services (b) The Drugs Controller of India
(c) The Director, Central Drugs Laboratory (d) The Director, Central Research Laboratory
- (xvii) The drug and magic remedies Act was passed in the year-
(a) 1954 (b) 1958 (c) 1962 (d) 1974
- (xviii) Central Drug Laboratory is located in-
(a) Mumbai (b) Kolkata (c) Lucknow (d) Hyderabad
- (xix) Schedule P is related to-
(a) Life period of drugs (b) Toilet Preparation (c) Ophthalmic Preparation (d) Biologicals
- (xx) Function of Drug Consultative Committee is-
(a) Make rules to implement the Drug & Cosmetics Act (b) Give consultation to pharmaceutical companies
(c) Advise the government in issues related to the Drug & Cosmetics Act (d) All of the above

Q2 Attempt any two questions

[2×10=20]

- a) Discuss about the aims and objectives of Pharmacy Act with main features of the act.
- b) Explain narcotic drugs and psychotropic substances act-1985 & rules in brief.
- c) Discuss in brief about the CPCSEA guidelines for breeding & stocking of animals.

Q3 Attempt any seven questions

[7×5=35]

- a) Define Patents, Copyrights and Trademarks.
- b) Explain about functions of Narcotic & Psychotropic Consultative Committee.
- c) Discuss offences and penalties pertaining to Medicinal & Toilet Preparation Act.
- d) Define the terms- 'Adulterated drugs', 'Misbranded drug' and 'Spurious drug'
- e) Explain about MAPE and how is it calculated?
- f) Discuss about bonded laboratory as per Medicinal & Toilet Preparation Act.
- g) Summarize about the composition of Drugs Technical Advisory Board.
- h) Enlist about the drugs & cosmetics that are prohibited for import.
- i) Differentiate between loan license and repacking license.
