

S100123

GOVERNMENT OF KARNATAKA
BOARD OF EXAMINING AUTHORITY
D. Pharm Part-1 Examination (ER-2020) - January-2023
PHARMACEUTICS

Time: 3 Hours

Note: i) Answer 6 questions from section A, 10 questions from section B and all questions from section C.
ii) Draw diagram wherever necessary.
iii) Answer to the point for objective type.

Max marks: 80 M

SECTION -A

Long Essay (Answer any six)

1. Describe in detail about the latest edition of Indian Pharmacopoeia
2. What are different types of containers used in Pharmaceutical industry
3. Discuss the theory of filtration
4. Explain the construction and working of double cone blender. Give any two applications
5. Classify different types of tablets with suitable examples
6. Describe ointment bases with suitable examples
7. What is novel drug delivery system? List the advantages and challenges of novel drug delivery systems

6X5=30 M

SECTION -B

Short Essay (Answer any ten)

8. Explain the importance of pharmacy education in India
9. Mention the advantages and disadvantages of rubber as a pharmaceutical packaging material
10. Describe the mode of action of Preservatives
11. Explain the working of fluidized bed dryer with neat labeled diagram. Give any two applications
12. Differentiate suspension and emulsion
13. Discuss the principle and construction of ball mill
14. Differentiate hard and soft gelatin capsules
15. What are pyrogens and explain the pyrogen test.
16. Write a note on oral controlled drug delivery system
17. Describe the basic structure of pharmaceutical manufacturing plant
18. Explain the construction and working of cyclone separator

10X3=30 M

SECTION -C

Objective type (Answer all questions)

19. Define gels
20. Define pastes
21. Give two examples of sweetening agents
22. Give two examples of chelating agents
23. Define mixing
24. Define size separation
25. What is the disintegration time of hard gelatin capsules?
26. Which type of glass is used to fill dry powders?
27. What type of plastic is used in eye ointment tubes
28. Define percolation
29. Give two examples of suppository bases
30. What are nasal drops?
31. Silverson mixer homogenizer works on the principle of _____
32. The Bengal chemical and pharmaceutical works was the first indigenous industry established in the year _____
33. The particle of _____ pass through a sieve # 22
34. The first international pharmacopoeia was published in the year _____
35. Match the following.

20X1=20M

A

- 1) Niosomes
- 2) Quality control
- 3) Lacrisert
- 4) Quality assurance

B

- a) Aim to prevent defects
- b) non ionic surfactants based vehicle
- c) Aim to improve and identify defects
- d) Is sterilerod shaped device for the treatment of dry eye syndrome
- e) A thin lens designed to fit over the cornea
- f) Are sterile preparations multilayered solid or semisolid devices

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GOVERNMENT OF KARNATAKA
BOARD OF EXAMINING AUTHORITY
D. Pharm Part-1 Examination (ER-2020) - January-2023
PHARMACEUTICAL CHEMISTRY

Max marks: 80 M

Time: 3 Hours

- Note: i) Answer 6 questions from section A, 10 questions from section B and all questions from section C.
ii) Draw diagram wherever necessary.
iii) Answer to the point for objective type.

Long Essay (Answer any six)

1. Explain complexometric titrations and write the assay of calcium gluconate
2. With a neat labeled diagram of apparatus write the principle and reactions involved in the limit test for arsenic IP
3. Write a note on dental products
4. Define and classify sedatives and hypnotics with examples. Write the structure of phenobarbital
5. Define and classify antiarrhythmic agents with examples
6. Write the structure, chemical name and uses of propranolol and phenytoin
7. Classify antimalarial agents with examples

SECTION -A

6X5=30 M

Short Essay (Answer any ten)

8. Explain types of errors
9. Write the principle and reactions of limit test for chlorides
10. Classify general anaesthetics with examples. Write the structure of thiopental sodium
11. Define and classify antidiabetic agents with examples. Write the structure of metformin
12. Write the structure, chemical name and uses and two brand names of Frusemide
13. Define and classify antacids with examples
14. Write the structure, chemical name, uses and any two brand names of Paracetamol
15. Define sulphonamides. Write the structure chemical name and uses of dapsone
16. Define antifungal agents. Write the structure of fluconazole and amoxicillin
17. Define and classify antineoplastic agents with examples
18. Classify cholinergic drugs with examples. Write the structure and uses of acetyl choline

SECTION -B

10X3=30 M

Objective type (Answer all questions)

19. Define assay
20. Write the structure of furan and pyridine
21. Write the labeling and storage conditions of laughing gas.
22. Write the structure of Captopril
23. Name any two calcium channel blockers
24. Define oxidation - reduction titrations
25. Define antibiotic
26. Write the structure and chemical name of indole
27. Write the combination of co-trimoxazole
28. Name any two drugs from cephalosporin group of antibiotics
29. Write the structure of Chloramphenicol
30. Define precision
31. ----- is a narcotic antagonist
32. ----- titrant is most commonly used in precipitation titration
33. ----- is an anticorona drug used to treat covid - 19 infections
34. Novamox is a brand name of -----
35. Match the following.

SECTION -C

20X1=20M

A

- 1) Morphine
- 2) Neostigmine
- 3) Copper sulphate
- 4) Adrenaline

B

- a) Blue vitriol
- b) Anaphylactic shock
- c) Anticonvulsant
- d) Cholinesterase inhibitor.
- e) Opioid analgesic
- f) Throat infection

PHARMACOGNOSY

Time: 3 Hours

Max marks: 80 M

Note: i) Answer 6 questions from section A, 10 questions from section B and all questions from section C.
ii) Draw diagram wherever necessary.
iii) Answer to the point for objective type.

SECTION -A

Long Essay (Answer any six)

6x5=30 M

1. Define Adulteration of crude drugs. Explain any four types or methods of adulteration with suitable examples.
2. Write the historical development and present status of Pharmacognosy.
3. Write the Biological source, Chemical constituents and therapeutical uses of drug each belonging to a) Acanthaceae b) Myrtaceae.
4. Define Glycosides. Write the general methods of isolation of Glycosides.
5. Write the basic principle involved in Homeopathic system of Medicine.
6. Enumerate the classification of crude drugs. Explain chemotaxonomical classification.
7. Define Cardiotonics. Write the Biological source, Chemical constituents of drugs used as cardiotonics.

SECTION -B

Short Essay (Answer any Ten)

10x3=30M

8. Write the method of preparation of Asava and Bhasma.
9. Write the general chemical tests of Alkaloids.
10. Differentiate Plant and Animal fibres.
11. Write the Alphabetical classification of crude drugs with merits and demerits.
12. Write in brief about chemical evaluation of crude drugs.
13. Give the source, Chemical constituents, cosmetic uses and commercial preparation of Aloe vera gel.
14. Write the various herbs containing omega -3- fatty acids and give its therapeutic applications.
15. Write the export potential of medicinal and aromatic plants.
16. Write the chemical constituents and therapeutic uses of a) Ephedra b) Gokhru c) Vinca.
17. Define Herbal formulations. Classify different herbal formulations with examples.
18. Define Pharmaceutical aids. Write any two chemical tests for Agar.

SECTION -C

Objective type (Answer all questions)

20x1=20M

19. Define evaluation of crude drugs.
20. Define Volatile oils.
21. Name any two antioxidants.
22. Define Stomatal number.
23. Give the Biological source for senna.
24. Write the chemical constituents and uses of Sandalwood oil.
25. Define Pharmacognosy.
26. What is Pharmacological classification?
27. Name any one antidiabetic drug and write its chemical constituents.
28. What is surgical catgut?
29. Name any two distinction tests between Black catechu and Pale catechu.
30. What are Nutraceuticals?
31. _____ is the family of Asafoetida.
32. Cinchona is used as _____ and _____
33. _____ is an example for antihypertensive drug and belongs to _____ family.
34. _____ is the shape of Cinnamon Bark.
35. Match the following

A

1. Disc shape of Nuxvomica seeds.
2. Anti-dysenteric.
3. Keller Killiani test.
4. Unani medicine.

B

- a) Hippocrates.
- b) Charaka.
- c) Organoleptic evaluation.
- d) Ergot.
- e) Ipecac.
- f) Digitalis.

**GOVERNMENT OF KARNATAKA
BOARD OF EXAMINING AUTHORITY
D. Pharm Part-1 Examination (ER-2020) - January-2023
HUMAN ANATOMY AND PHYSIOLOGY**

Time: 3 Hours

Max marks: 80 M

Note: i) Answer 6 questions from section A, 10 questions from section B and all questions from section C.

ii) Draw diagram wherever necessary.

iii) Answer to the point for objective type.

SECTION -A

6X5=30 M

Long Essay (Answer any six)

1. Classify different types of bones of skeleton system.
2. Explain the sequence of blood clotting.
3. Describe the internal structure of heart.
4. Explain the structure and functions of liver.
5. Describe the structure and functions of spinal cord.
6. Draw a neat labeled diagram of ear and write its functions.
7. Name the hormones of adrenal gland and mention their functions.

SECTION -B

10X3=30 M

Short Essay (Answer any ten)

8. Define muscular tissue. Write a short note on Non- striated muscle.
9. Write the composition and functions of blood.
10. Discuss structure and functions of Lymph nodes.
11. Explain Renin angiotensin system.
12. Explain the mechanism of breathing.
13. Write the composition and functions of saliva.
14. Write the functions of medulla oblongata.
15. Draw neat labeled diagram of eye.
16. Write briefly on spermatogenesis.
17. Write the functions of ADH and oxytocin.
18. Draw a neat labeled diagram of skeletal muscle.

SECTION -C

20X1= 20M

Objective type (Answer all questions)

19. What are Goblet cells?
20. What are cytoskeletal structures?
21. What are lysosomes?
22. Name any two cartilages.
23. What is Rh factor?
24. Define hypotension.
25. What is Tidal volume?
26. What is Nephron?
27. Define spermatogenesis.
28. What is menstrual cycle?
29. Define BP. Write its normal value.
30. Mention two disorders of Thyroid gland.
31. The spermatozoa are produced in the ----- tubules.
32. Power house of the cell is called -----
33. Lungs lie in the thoracic cavity separated by ---- from the abdominal cavity
34. The dental formula of permanent teeth is -----
35. Match the following.

- | A | B |
|-----------------|------------------------------------|
| 1) Cerebrum | a) Controls the pituitary gland |
| 2) Cerebellum | b) Controls the vision and hearing |
| 3) Hypothalamus | c) Controls the rate of heart beat |
| 4) Midbrain | d) Seat of intelligence |
| | e) Maintenance of body posture |
| | f) Ventricles |

**GOVERNMENT OF KARNATAKA
BOARD OF EXAMINING AUTHORITY
D. Pharm Part-I Examination (ER-2020) - January-2023
SOCIAL PHARMACY**

Time: 3 Hours

Max marks: 80 M

- Note: i) Answer 6 questions from section A, 10 questions from section B and all questions from section C.
ii) Draw diagram wherever necessary.
iii) Answer to the point for objective type.

SECTION -A

6X5=30 M

Long Essay (Answer any six)

1. Define health. Enlist the various dimensions of health
2. Write the importance of breast feeding
3. Define balanced diet. Explain prevention of various types of nutritional deficiency diseases
4. Write the applications of epidemiology
5. Enlist five respiratory infections with causative microorganisms
6. Explain clinical presentation, causative agents of malaria
7. Write the types of chemical and mechanical contraceptives

SECTION -B

10X3=30 M

Short Essay (Answer any ten)

8. Explain the application of Pharmacoeconomics
9. Write the causative organism and preventive measures of STDs
10. Write the objectives and functioning outcome of NPHCE
11. Write the effects of artificial ripening
12. Give two examples for drug - food interaction
13. How to prevent environmental pollution due to pharmaceuticals
14. Enlist any three national health programs with two objectives each
15. How to control suicidal behaviors in psychosocial pharmacy
16. Write the clinical presentation and preventive measures for typhoid
17. Write the clinical presentation and preventive measures for dengue
18. How to control alcohol withdrawal symptoms

SECTION -C

20X1= 20M

Objective type (Answer all questions)

19. Write the important role of international labour organization (ILO)
20. Mention any four psychotropic substances
21. Give the examples of body building foods
22. Write the disease caused by deficiency of Iron
23. Why Kwashiorkor is called as "RED BOY"?
24. List the adulterants of coffee powder
25. Mention the chemicals used for artificial ripening
26. Write the causative organism of chicken pox
27. Write the causative agents of mumps and tetanus.
28. Write the main objectives of NMHP
29. Define cost minimization analysis
30. Name the disease caused by increased blood uric acid concentration
31. NHP stands for —
32. Incubation period for HIV is —
33. Noise pollution starts at — decibels
34. NTP was started in —
35. Match the following

- A**
- 1) Aedes aegypti
 - 2) Vitamin B1
 - 3) Vitamin D
 - 4) Ascorbic acid

- B**
- a) Beri- Beri
 - b) Scurvy
 - c) Cataract
 - d) Osteoporosis
 - e) Night blindness
 - f) Dengue

GOVERNMENT OF KARNATAKA
BOARD OF EXAMINING AUTHORITY
B. Pharm Part-I Examination (IIE-2020) - July-2023
PHARMACEUTICS

Time: 3 Hours

Max marks: 80 M

Note: (i) Answer 6 questions from section A, 10 questions from section B and all questions from section C.

(ii) Draw diagram wherever necessary.

(iii) Answer to the point for objective type.

SECTION - A

Long Essay (Answer any six)

6X5=30 M

1. Explain salient features of IP 2018
2. Classify packaging material with suitable example for each class. Describe primary, secondary and tertiary packing with example for each
3. Explain the principle and working of cyclone separator
4. Explain the construction and working of hammer mill with a neat labeled diagram
5. Define capsule. Differentiate hard and soft gelatin capsules
6. What are toxoids? Explain preparation of any one toxoid/ antitoxin
7. What are novel drug delivery systems (NDDS)? Give its advantages. Add note on challenges in NDDS

SECTION - B

Short Essay (Answer any ten)

10X3=30 M

8. Elaborate upon history of pharmaceutical education in India
9. What are the ideal requirements of pharmaceutical packing material?
10. What are preservatives? Give two examples. Give its ideal requirements
11. Explain the principle and working of Silverson's mixer homogenizer
12. What are membrane filters? Give its applications
13. Explain principle of freeze drying. Mention its applications
14. Differentiate syrups and elixirs
15. What are ointments? Classify with examples
16. What are the ideal requirements for an injectable?
17. Explain concept of Quality assurance
18. Classify novel drug delivery systems with examples

SECTION - C

Objective type (Answer all questions)

20X1=20M

19. What is Extra Pharmacopoeia
20. Mention uses of type IV glass
21. What are light resistant containers? Give its use
22. Name two coal tar dyes
23. What are very fine powders?
24. Give Kozeny-Carmen equation
25. Define percolation
26. What are pyrogens?
27. Define Quality control
28. Define validation
29. Name two novel ophthalmic delivery formulations
30. What is the concept of calibration?
31. Hammer mill works on the principle of _____
32. The latest edition of Indian pharmacopoeia was published in the year _____
33. Cocoa butter is also known as _____
34. _____ substances absorb moisture from atmosphere and turn into liquid form
35. Match the following.

| A | B |
|----------------------------|---------------------|
| 1) Diatomaceous earth | a) Explotab |
| 2) Mena Entercum | b) preservative |
| 3) Crocclin | c) flavorant |
| 4) Sodium starch glycolate | d) lipid phase |
| | e) suppository base |
| | f) filter aid |

GOVERNMENT OF KARNATAKA
BOARD OF EXAMINING AUTHORITY
D. Pharmacy Part III Examination (IIL-2020) July 2023
PHARMACEUTICAL CHEMISTRY

Time: 3 Hours

Max. marks: 80. M

- Note: i) Answer 6 questions from section A, 10 questions from section B and all questions from section C.
ii) Draw diagram wherever necessary.
iii) Answer to the point for objective type.

SECTION - A

6X5=30 M

Long Essay (Answer any six)

1. Explain the principle and reactions involved in the limit test for arsenic. Mention the role of potassium iodide and stannous chloride.
2. Explain the principle and reactions involved in the assay of sodium chloride.
3. What are cholinergic drugs? Give the structure, chemical name and uses of a) Acetyl choline b) Neostigmine.
4. What are anti-arrhythmic drugs? Explain in detail about isosorbide dinitrate.
5. Define and classify tranquilizers with examples. Write the structure, chemical name and uses of Phenobarbitone.
6. Classify antitubercular drugs with examples. Write the structure, chemical name, brand name and uses of INH.
7. Write short note on the chemistry of amoxicillin and cloxacillin.

SECTION - B

10X3=30 M

Short Essay (Answer any ten)

8. Name the official compounds of iron with its uses.
9. Define hypnotics and sedatives. Write the structure of haloperidol.
10. Define with two examples the following: a) Desensitizing agents b) Protectives & Adsorbents.
11. Write the structure, chemical name, stability, storage and uses of propranolol.
12. What are cardiovascular drugs? Give examples.
13. What are diuretics? Classify with examples.
14. Define and classify antiviral agents with examples.
15. Write a note on hypoglycaemic agents. Give the structure of metformin.
16. Give the stability, storage, uses & one brand name for a) Aspirin b) Paracetamol.
17. a) Differentiate between iodometry and iodimetry.
b) Why is citric acid used in iron limit test?
c) Why is potassium permanganate a self indicator?
18. Write the stability, storage and uses of a) Benzyl penicillin b) Chloramphenicol c) Tetracycline.

SECTION - C

20X1=20M

Objective type (Answer all questions)

19. Define error.
20. What are indicators? Give two examples.
21. Name any two antibiotics used for cancer treatment.
22. What are systemic antacids? Give examples.
23. Explain the storage condition for oxygen gas.
24. Name the source of insulin.
25. Name the heterocyclic ring present in metronidazole.
26. Give the structure of glibenclamide.
27. Write one brand name for diazepam.
28. What are analgesic and anti-inflammatory agents?
29. With numbering, write the structure of pyrazole and quinolone.
30. Write the structure of ibuprofen.
31. Degree of agreement between repeated measurements is—
32. Agents which precipitate proteins are called—
33. Molecular formula of bleaching powder is—
34. — is an example for external indicator.
35. Match the following:

A

B

- 1) Pilocarpine
- 2) Captafol
- 3) Frusemide
- 4) Aldactone

- a) Diuretic
- b) Miotic
- c) Antihypertensive
- d) Antifungal
- e) Spironolactone
- f) Alkaloid

GOVERNMENT OF KARNATAKA
BOARD OF EXAMINING AUTHORITY
D. Pharm Part-1 Examination (I.R. 2020) - July-2023
PHARMACOGNOSY

Time: 3 Hours

Max marks: 80 M

Note: i) Answer 6 questions from section A, 10 questions from section B and all questions from section C.

ii) Draw diagram wherever necessary.

iii) Answer to the point for objective type.

SECTION -A

Long Essay (Answer any six)

6X5=30 M

1. Define Volatile oils. Explain the extraction and isolation methods for Volatile oils.
2. Write the Biological source, family, chemical constituents and uses of two antidiabetic drugs.
3. Write the scope of Pharmacognosy.
4. Define adulteration. Explain the different types of Adulteration with examples.
5. Mention the different systems of classification of crude drugs and explain the Taxonomical classification with examples.
6. Write the basic principles involved in Ayurvedic system of Medicine.
7. Mention the drug belonging to the following families and write its biological source, chemical constituents and uses. a) Zygophyllaceae b) Bursaraceae.

SECTION -B

Short Essay (Answer any ten)

10X3=30 M

8. Write the morphological classification of crude drugs with examples.
9. Explain the biological evaluation of crude drugs.
10. Write the identification tests for Tannins.
11. Define latex. Write the Biological source, Family, Chemical constituents and uses of any one latex drug.
12. Write the preparation of Surgical Catgut.
13. Define Bhasma and give its method of preparation.
14. Write the export potential of medicinal and aromatic plants.
15. Define antioxidants and give its therapeutic applications.
16. Write the biological source, chemical constituents and uses of Sandalwood oil.
17. Mention the various herbal formulations and explain the preparation of any one advanced herbal formulation.
18. Define Oxytocic. Write the chemical constituents of Ergot.

SECTION -C

Objective type (Answer all questions)

20X1= 20M

19. Name the person who coined the word 'Pharmacognosy'.
20. Name two drugs containing Resins and gums.
21. Name the type of Trichomes and stomata present in Senna leaflet.
22. Name the crude drug containing Tropane alkaloids and write its use.
23. Give one example for antihypertensive and vitamins.
24. Name a drug containing Azadirachtin and Emetine.
25. Name the drug belonging to the family a) Theaceae b) Plantaginaceae.
26. What is short length fibers called in the preparation of Absorbent cotton?
27. Name the three principles of Tridosha concepts in Ayurveda.
28. Name any two commercially available Churna in the market?
29. Give two examples of Dietary fibers.
30. Name the Nutraceutical obtained from algae and give its therapeutic use.
31. _____ are colloidal systems with particle size ranging from 10-1000nm.
32. Olive oil is a fixed oil obtained by expression of ripe fruits of _____ belonging to the family _____.
33. _____ are the living micro organisms which improve the intestinal microbial balance and _____ are the substance which reach to the colon in the intact form without getting depleted by GIT.
34. _____ Chemical testis used to identify Cardiac glycosides.
35. Match the following.

A

- 1) Acacia
- 2) Allicin
- 3) Curcumin
- 4) Antihistive

B

- a) Vasaka
- b) Turmeric
- c) Cinchona
- d) Ginger
- e) Garlic
- f) Pharmaceutical aid.

GOVERNMENT OF KARNATAKA
 BOARD OF EXAMINING AUTHORITY
 D. Ph.D. Part I Examination (J.R. 2020) - July 2023
 HUMAN ANATOMY & PHYSIOLOGY

Time: 3 Hours

Max marks: 80 M

Note: i) Answer 5 questions from section A, 10 questions from section B and all questions from section C.

ii) Draw diagram wherever necessary.

iii) Answer to the point for objective type.

SECTION - A

Long Essay (Answer any six)

6X5=30 M

1. Enumerate all the bones of axial skeletal system and write its function.
2. Write the composition and functions of blood.
3. Draw a neat labeled diagram of heart and explain pulmonary circulation.
4. Draw a neat labeled diagram of Neuron. Explain the process of urine formation.
5. Explain anatomy and physiology of pancreas.
6. Draw a neat labeled diagram of EAR and explain the physiology of hearing.
7. List out the hormones of pituitary gland and write their functions.

SECTION - B

Short Essay (Answer any four)

10X3=30 M

8. Explain the function of lymph node.
9. Classify muscular tissue with examples.
10. Write the functions of thyroid hormones.
11. Write the functions of hypothalamus.
12. Draw a neat labeled diagram of respiratory system.
13. Write a note on conducting system of heart.
14. Explain clotting mechanism.
15. Draw a neat labeled diagram of eye.
16. Enumerate the functions of liver.
17. Explain the structure and functions of the ovary.
18. Write a note on synovial joint.

SECTION - C

Objective type (Answer all questions)

20X1=20M

19. Define tissue with examples.
20. Mention the principle unit of kidney.
21. What are lysosomes?
22. Define epithelial tissue with examples.
23. Write the composition of lymph.
24. Define Erythropoiesis.
25. Define blood pressure with its normal value.
26. Define tidal volume and its normal value.
27. Write the functions of gastric juice.
28. Mention the function of testes.
29. Define fertilization.
30. List out the muscles of respiration.
31. Principle unit of brain is _____.
32. _____ is the longest bone in the body.
33. The outer most layer of cardiac muscle is _____.
34. _____ is the reddish pigment within a skeletal muscle fiber that has the ability to bind oxygen.
35. Match the following

| A | B |
|------------------|--|
| 1) Apoptosis | a) Study of body structure |
| 2) Median plane | b) Power house of the cell |
| 3) Gross anatomy | c) Expelling urine from the bladder. |
| 4) Micturition | d) Divide the body into left and right halves. |
| | e) Process of giving birth to child. |
| | f) Programmed cell death. |

GOVERNMENT OF KARNATAKA BOARD OF EXAMINING AUTHORITY
D. Pharm Part-1 Examination (ER-2020) - JANUARY- 2024
PHARMACEUTICS

Time: 3 Hours

Max marks: 80 M

Note: i) Answer 6 questions from section A, 10 questions from section B and all questions from section C.

ii) Draw diagram wherever necessary.

iii) Answer to the point for objective type.

SECTION -A

6X5=30 M

Long Essay (Answer any six)

1. Write the salient features of fourth edition of IP
2. Explain the principle, construction and working of ball mill with its applications
3. Write the different methods used for the preparation of ointments
4. Explain the theories of filtration
5. Describe the selection criteria for selection of packaging material
6. What are Injections? Add a note on additives used in injectable preparation.
7. Define NDDS. Classify various types of novel drug delivery system

SECTION -B

10X3=30 M

Short Essay (Answer any ten)

8. Write a note on Oral Controlled drug delivery system
9. Enlist various quality control tests performed for capsules. Explain any one quality control test in detail
10. Write the difference between lotions and liniments
11. Write a note on GMP
12. Write two examples each for preservatives, antioxidants and sweetening agents
13. Describe the principle and construction of Fluidized bed dryer
14. Classify different types of tablets
15. Describe the working of Turbine mixer with a neat labeled diagram
16. Write the working of cyclone separator with a neat labeled diagram
17. Write a note on career opportunities in Pharmacy profession
18. Mention the advantages and disadvantages of glass as material used in pharmaceutical packaging

SECTION -C

20X1= 20M

Objective type (Answer all questions)

19. Define Ointment
20. What are pyrogens
21. Define Extra pharmacopoeia
22. What is percolation
23. Give two examples of vaccines
24. Name any two Targeted drug delivery system
25. Define Quality control
26. Define Total quality management
27. What type of plastic is used in disposable syringes
28. Define the term "sieve"
29. What is the principle behind hammer mill
30. What are effervescent granules?
31. _____ is the Father of Pharmacy
32. The primary emulsion formula used for fixed oils is _____
33. The fifth edition of Indian Pharmacopoeia was published in _____ year
34. Extraction without the aid of heat is _____
35. Match the following.

A

- 1) Type I glass
- 2) Colouring agent
- 3) Menstruum
- 4) Sweetening agent

B

- a) Solvent used for extraction
- b) Borosilicate
- c) Soda lime
- d) Caramel
- e) Saccharine
- f) EDTA

GOVERNMENT OF KARNATAKA
BOARD OF EXAMINING AUTHORITY
B. Pharm Part-I Examination (EE-2020) JANUARY 2024

PHARMACEUTICAL CHEMISTRY

Time: 3 Hours

Max. marks: 80 M

- Note: 1) Answer 6 questions from section A, 10 questions from section B and all questions from section C.
2) Draw diagram wherever necessary.
3) Answer to the point for objective type.

SECTION -A

6X5=30 M

Long Essay (Answer any six)

1. Write the Principle and procedure involved in the limit test for Arsenic and draw a neat labeled sketch of Gutzert apparatus.
2. Write the principle and various steps involved in the Gravimetric analysis.
3. Define sedative and hypnotics. Classify them with examples. Write the structure, chemical name, use, stability and storage conditions and brand name of Alprazolam.
4. What is Para sympatholytic agent. Classify them with examples. Give the chemical structure, chemical name and uses of Dicyclanone hydrochloride.
5. Define Antihypertensive agents. Classify them with examples. Write the structure and chemical name, uses and brand names of Captopril.
6. a. What are sulfonamides? Classify them with examples write the structure and brand name of sulfacetamide.
b. Classify Anti-tubercular agents giving suitable examples.
7. Classify Antifolates according to chemical structure with examples. Draw and explain the structure of basic nucleus of Penicillins. Also write structure of Amoxicillin with its chemical name.

SECTION -B

10X3=30 M

Short Essay (Answer any ten)

8. What are medicinal gases? Write the storage, labeling and uses of Nitrous oxide.
9. Define Topical agents. Write the preparation, uses and pharmaceutical formulations of Silver nitrate.
10. What are Neuroleptics? Classify with examples. Write the structure of Chlorpromazine Hydrochloride.
11. Classify adrenergic drugs with examples. Write the structure and pharmaceutical formulation of Norepinephrine.
12. Write a note on Antiarrhythmic agents. Write the structure of Phenytoin sodium with its brand names.
13. What are diuretics. Draw the chemical structure of Furosemide. Give its chemical name and uses.
14. Explain Diabetes mellitus. Classify hypoglycemic agents with examples.
15. Write the structure, properties, uses and brand names of Ibuprofen.
16. What are antimalarial agents. Classify them with examples. write the structure of Chloroquine phosphate.
17. Write the structure, properties pharmaceutical formulations and brand name of Chloramphenicol.
18. Define antineoplastic agents? Write the structure, chemical name, pharmaceutical formulation and brand names of Cisplatin.

SECTION -C

20X1= 20M

Objective type (Answer all questions)

19. Define Precision and Accuracy.
20. Define Normality and Molarity.
21. Define Isomers.
22. Write example for Anticaries agents.
23. Phenytoin is an— a. Antidepressant b. Sarcous fluoride c. Calcium carbonate d. Zinc chloride
24. Neostigmine is used as
25. Give example non-selective beta blocker.
26. Give the example of Loop diuretics.
27. Write the brand name of Glimpiride.
28. Write the example for nonselective COX-2 inhibitor.
29. Write the antibiotic used in the treatment of multidrug resistant tuberculosis.
30. Name the penicillin derivative which is used to treat infections produced by gram positive bacteria.
31. Write the example for an alkylating agent.
32. Write the chemical name of Chlorinated lime.
33. — suffix for -ate is a. -CN b. -OH c. -COOR d. -CHO
34. — is a Beta Adrenoreceptor antagonist a. Atenolol b. Amfodigine c. Verapamil d. Bepridil
35. Match the following

| A | B |
|------------------------------|-----------------------------|
| 1) Furosemide | a) Colocoxib |
| 2) Zinc chloride | b) To treat Iron deficiency |
| 3) Selective COX-2 Inhibitor | c) Demulcents |
| 4) Ferrrous fumarate | d) Diuretics |
| | e) NSAID'S |

GOVERNMENT OF KARNATAKA
BOARD OF EXAMINING AUTHORITY
D, PHARM PART I EXAMINATION (ER - 2020) JANUARY 2024

PHARMACOLOGY

TIME: 3 HOURS.

MAX MARKS: 80

- Note: i. Answer 6 from Section A, 10 from Section B and all questions from Section C.
ii. Draw diagrams wherever necessary.
iii. Answer to the point for objective type.

LONG ESSAY (Answer any 6)

SECTION A

6X5=30M

1. Define crude drugs. Briefly explain chemical classification with examples.
2. Write a note on history and Scope of Pharmacognosy.
3. Write the biological source, chemical constituents and therapeutic uses of each drug belonging to
a) Myristicaceae b) Apocynaceae
4. Define Volatile oils. Classify them with suitable examples. Enlist the isolation methods of volatile oils.
5. Explain the basic principle involved in the traditional systems of Medicine practiced in India.
6. Briefly enumerate the different types of adulteration of crude drugs with examples.
7. Define antiseptics and disinfectants. Write the botanical source, family, Chemical constituents of any two drugs of this category.

SECTION B

10X3=30M

Short essay (Answer any 10)

8. Write the Biological Source, family, chemical constituents and therapeutic uses of cotton.
9. Write in brief various physical evaluation of drugs in quality control.
10. Enumerate the various Ayurvedic formulations and write the preparation of Aavaicha.
11. Write a note on Carotenoids and its therapeutic uses as health foods.
12. Write the chemical name and category of a) Guggul b) Ashwagandha c) Senna.
13. Give the chemical tests for Saponin glycosides.
14. Define Antitussives and Antirheumatics give examples for each.
15. Enumerate the various herbal cosmetic formulations with examples.
16. Write the morphological classification of crude drugs with merits and demerits.
17. Give the biological source, chemical constituents and uses of Papan and gelatin.
18. Explain the strategy to improve trade of medicinal plants and their products.

SECTION C

Objective Type (Answer all question)

20X1=20M

19. Define Stomatal index.
20. Define vitamins.
21. Name any two flavouring agents.
22. Name the biological source and family of Clove flower bud.
23. Define Suture and Ligature.
24. Write the Biological role of Soyabean.
25. Give the chemical test for Quinine.
26. Mention the uses of Nuxvomica and Gymnema.
27. Define alkaloids.
28. What are astringents and give examples.
29. Give one example for Probiotics and Prebiotics.
30. Mention the chemical tests for tannins.
31. The chief chemical constituents present in coriander is _____
32. Rauwolfia is used as _____ agent
33. The family of Aloe vera is _____
34. The Azeotropic / toluene distillation is used to determine _____ content in drugs
35. Match the following

- A
1. Arjuna
 2. Clove oil
 3. Polyunsaturated fatty acid
 4. Pale catobu

- B
- i) Gambier fluorescein test
 - ii) Oxytocic
 - iii) Cardiotonic
 - iv) Dental analgesic
 - v) Haemolysis
 - vi) Nutraceuticals

GOVERNMENT OF KARNATAKA
BOARD OF EXAMINING AUTHORITY
D. Pharm Part-I Examination (ER-2020) JANUARY 2024
HUMAN ANATOMY AND PHYSIOLOGY

Time: 3 Hours

Max marks: 80 M

- Note: i) Answer 6 questions from section A, 10 questions from section B and all questions from section C.
ii) Draw diagram wherever necessary.
iii) Answer to the point for objective type.

Long Essay (Answer any six)

SECTION - A

6X5=30 M

1. Classify Joints and explain the synovial joint with diagram.
2. Explain the physiology of the blood.
3. Explain in detail pulmonary and systemic circulation.
4. Describe the histology of small intestine with a diagram and its functions.
5. Define reflex action and explain reflex arc with a diagram.
6. Explain the physiology of the eye.
7. Name the secretions of pituitary gland and their functions.

SECTION - B

10X3=30 M

Short Essay (Answer any ten)

8. Name different types of epithelial tissue with their location and functions.
9. Describe Erythropoiesis
10. Draw a neat labeled diagram of internal structure of the heart.
11. Explain the mechanism of external respiration
12. Write the composition and functions of saliva.
13. Write the difference between sympathetic and parasympathetic nervous system.
14. Describe the physiology of the skin.
15. Describe the role of kidney in maintenance of blood pressure.
16. Explain the endocrine part of pancreas.
17. Explain the process of Spermatogenesis.
18. Write the structure and functions of spleen.

SECTION - C

20X1= 20M

Objective type (Answer all questions)

19. Define cell.
20. Name two female sex hormones.
21. Classify tissue.
22. Name the circulation that supplies blood to heart muscle.
23. Define internal respiration.
24. Name three pairs of salivary glands.
25. Write any two functions of mitochondria.
26. What is Puberty?
27. List the cartilages present in the larynx.
28. Give any two functions of lymphatic system.
29. Write any two properties of RBC.
30. What is micturition?
31. Pleura is membrane around the ____.
32. Palm is made of 5 metacarpals and ____ carpals.
33. Tongue is an example of ____ muscle.
34. The artery which leaves the Bowman's capsule is called ____ artery.
35. Match the following

A

B

- | | |
|-------------------|---|
| 1) Ovum | a) Vagus |
| 2) Frontal Plane | b) Liver |
| 3) Cranial nerve | c) Divides the body into anterior and posterior |
| 4) Adrenal cortex | d) Taste buds |
| | e) Oogenesis |
| | f) Aldosterone |

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GOVERNMENT OF KARNATAKA BOARD OF EXAMINING AUTHORITY
D. Pharm Part-I Examination (RR-2020) - JANUARY-2024
SOCIAL PHARMACY

Time: 3 Hours

Note: I) Answer 6 questions from section A, 10 questions from section B and all questions from section C. Max marks: 80 M

ii) Draw diagram wherever necessary.

iii) Answer to the point for objective type.

SECTION - A

6X5=30 M

Long Essay (Answer any six)

1. Define Public Health. Elaborate how pharmacists can contribute to public health.
2. What are the environmental risk factors for Disease? Explain cause and effects of Pharmaceutical pollution.
3. What is drug abuse? Describe adverse effects of alcohol on academic life.
4. What are Essential fatty acids? Give two examples. Write the source and functions of Vitamin D & Vitamin C.
5. Briefly write the causative organism, mode of transmission, diagnostic test, prevention and control of Diphtheria.
6. Write the causative agents, symptoms, mode of transmission and prevention and control of chicken pox.
7. Name four vector borne diseases. Explain the objectives of National Vector Control Programme.

SECTION - B

10X3=30 M

Short Essay (Answer any ten)

8. Define Health. Explain the four important dimensions of health.
9. What are the disadvantages of feeding a baby with formula based bottle feeding?
10. What are the types of vaccines? Give examples for each.
11. What is Glycemic index of food? Give an example for high GI food and low GI food.
12. What is DASH diet? Write a safe diet for Hypertension.
13. Write the causative agents and clinical presentation involved in Filariasis.
14. Define Epidemiology. What are the methods used in Epidemiology?
15. What is food poisoning? List methods adopted for prevention and control of food poisoning.
16. Explain the role of Pharmacist in education, prevention and control of Typhoid.
17. Explain the mode of transmission of Cholera. What is ORS? List its composition.
18. Briefly write the lifecycle of malarial parasite.

SECTION - C

20X1=20M

Objective type (Answer all questions)

19. Define GME. Give two examples of GME.
20. Expand the abbreviation SARS.
21. What is the causative organism of Whooping Cough?
22. What are the drugs used in the treatment of tuberculosis?
23. Write a note on Phagocytosis.
24. Define a) Incubation period b) Quarantine.
25. Write the causative agents involved in mumps.
26. Expand the abbreviation MDGS.
27. What are narcotics? Give two examples.
28. What is innate immunity? Give types of innate immunity.
29. Give four benefits of Health insurance.
30. What is cost utility analysis (CUA)?
31. The microorganism that is photosynthetic is _____.
32. The adulterant used in pepper is _____.
33. Rabies is also known as _____.
34. Disease that spreads from one person to other is _____.
35. Match the following.

A

- 1) Antiseptic
- 2) Niacin
- 3) Creosol
- 4) Pesticide

B

- a) Iodine deficiency
- b) Urta and Phlogstote
- c) DDT
- d) Betadine
- e) Glycerine
- f) Polio
