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

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.

SECTION -A

6X5=30 M

Long Essay (Answer any six)

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

10X3=30 M

Short Essay (Answer any ten)

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

20X1= 20M

Objective type (Answer all questions)

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 Carman 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

- 1) Diatomaceous earth
- 2) Massa Esteruim
- 3) Candellia
- 4) Sodium starch glycolate

B

- a) Explotab
- b) preservative
- c) flavorant
- d) lipid phase
- e) suppository base
- f) filter aid

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Signature 9:22 AM / 17/7/23  
Dist. Superintendent  
J.C. COLLEGE OF PHARMACY  
SIRA TUMKUR.

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**GOVERNMENT OF KARNATAKA  
BOARD OF EXAMINING AUTHORITY  
D. Pharm Part-1 Examination (ER-2020) - July-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.

**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-anginal 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) Captopril
- 3) Frusemide
- 4) Aldactone

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

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

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.

## SECTION -A

6X5=30 M

Long Essay (Answer any six)

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

10X3=30 M

Short Essay (Answer any ten)

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

20X1= 20M

Objective type (Answer all questions)

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 test is used to identify Cardiac glycosides.
35. Match the following.

A

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

B

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

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

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.

SECTION -A

6X5=30 M

Long Essay (Answer any six)

1. Enlist 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 Nephron. 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

10X3=30 M

Short Essay (Answer any ten)

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. Enlist the functions of liver
17. Explain the structure and functions of the ovary.
18. Write a note on synovial joint.



SECTION -C

20X1= 20M

Objective type (Answer all questions)

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-----
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

- 1) Apoptosis
- 2) Median plane
- 3) Gross anatomy
- 4) Micturition

B

- a) Study of body structure
- b) Power house of the cell
- c) Expelling urine from the bladder.
- d) Divides the body into left and right halves
- e) Process of giving birth to child.
- f) Programmed cell death.

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