

INSTITUTE OF TEACHING AND RESEARCH IN AYURVEDA, JAMNAGAR

B. PHARM. (AYU.) SECOND YEAR EXAMINATION - December - 2023

PHARMACOGNOSY OF AYURVEDIC DRUGS - I

Date : 07/12/2023

Time : 02:30 P.M. - 05:30 P.M.

Thursday

Marks : 100

- Instructions: 1. Every question is compulsory.
2. Every question bears the marks written on the right side.

SECTION-A

1. Give detail account on classification of plant kingdom. 10
2. Answer any one out of two questions. 10
 - A Define Leaf & give its detail classification with suitable examples.
- OR
- B Describe cultivation of crude drugs in detail.
3. Write short notes on any **Four** of the following : 20
 - A. Describe Thallophyta and Bryophyta in detail.
 - B. Define Ovule. Draw neat & clean diagram of Ovule, Label and Discuss in detail.
 - C. Give botanical description of plant Datura.
 - D. Discuss plant growth regulators.
 - E. Test for identification of mucilage and their uses
4. Answer any **Five** of the following :(two to three sentences) 10
 - A. What are Genus and Species ?
 - B. Samara
 - C. Give uses of Guduchi.
 - D. Vacuum dryers
 - E. Modification of stem.
 - F. What is Angiosperm.

SECTION-B

5. What is tissues & discuss its various types. 10
6. Answer any one out of two questions. 10
 - A Discuss scope of pharmacognosy
- OR
- B Define crude drugs. How they are classified? Discuss each classification in detail with suitable examples.
7. Write short notes on any **Four** of the following : 20
 - A. Unani system of medicine
 - B. Morphological classification of crude drugs
 - C. Importance of starch grains in identification of crude drugs
 - D. Types of trichomes
 - E. Swelling factor
8. Answer any **Five** of the following :(two to three sentences) 10
 - A. Define organized drugs.
 - B. Cork
 - C. Biological source and uses of Kokilaksha
 - D. Botanical Source and chemical constituent of Brihat Gokshur
 - E. Endosperm
 - F. Define carbohydrate.

INSTITUTE OF TEACHING AND RESEARCH IN AYURVEDA, JAMNAGAR

B. PHARM. (AYU.) SECOND YEAR EXAMINATION - December - 2023

PHARMACEUTICAL MICROBIOLOGY

Date : 12/12/2023

Time : 02:30 P.M. - 05:30 P.M.

Tuesday

Marks : 100

- Instructions: 1. Every question is compulsory.
2. Every question bears the marks written on the right side.

SECTION-A

1. Enumerate the contributions of Louis Pasteur. 10
2. Answer any one out of two questions. 10
- A On what principle does PCR work? Describe the process and mention the applications of PCR.

OR

- B Discuss morphology of bacteria in detail.
3. Write short notes on any **Four** of the following : 20
 - A. General characteristics of viruses.
 - B. Enumerate five different types of culture media based on their nutritional factors
 - C. Transformation process.
 - D. Gram positive bacterial cell wall.
 - E. Design of an ideal fermentor.
4. Answer any **Five** of the following :(two to three sentences) 10
 - A. Define chemotrophs, chemo-organotrophs and chemo-lithotrophs.
 - B. What are bacterial spores? Give examples.
 - C. What is dark field microscopy?
 - D. Explain briefly why anaerobic bacteria cannot grow in presence of atmospheric oxygen.
 - E. Give examples of two harmful fungi.
 - F. What are the functions of Baffles and Sparger in a fermentor?

SECTION-B

5. Describe briefly the innate immune system. 10
6. Answer any one out of two questions. 10
- A Define and classify hypersensitivity.

OR

- B Explain drug resistance and its type in detail.
(I)Primary resistance (II) Acquired resistance
7. Write short notes on any **Four** of the following : 20
 - A. Ideal properties of disinfectants.
 - B. Membrane filtration
 - C. Validation of sterilization process.
 - D. Definition & mechanism of autoimmune diseases.
 - E. Biochemical oxygen demand.
8. Answer any **Five** of the following :(two to three sentences) 10
 - A. Name the antibodies found on the membrane of B cells.
 - B. Differentiate between sterilization & pasteurization process.
 - C. What is principle of ELISA test ?
 - D. Name two gaseous disinfectants.
 - E. Write full forms of MIC and MBC.
 - F. What is the function of alum in water purification?

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B. PHARM. (AYU.) SECOND YEAR EXAMINATION - December - 2023

RASASHASTRA AND BHAISHAJYA KALPANA - II(AYURVEDIC PHARMACEUTICS)

Date : 05/12/2023

Time : 02:30 P.M. - 05:30 P.M.

Tuesday

Marks : 100

- Instructions: 1. Every question is compulsory.
2. Every question bears the marks written on the right side.

SECTION-A

1. Define *Vati Kalpana*. Explain its general method of preparation, packaging and storage. 10
2. Answer any one out of two questions. 10
- A Define *Avaleha Kalpana*. Explain its general method of preparation, dose, *Anupana* and Shelf-life.

OR

- B Define *Guggulu Kalpana*. Explain *Guggulu Shodhana* and General method of any *Guggulu* preparation.
3. Write short notes on any **Four** of the following: 20
 - A. *Hingvashtaka Churna*.
 - B. *Mudvika Avaleha*.
 - C. *Sharkara Kalpana*.
 - D. Packaging, storage and current trends of *Churna Kalpana*.
 - E. *Gudapaka Kalpana*.
4. Answer any **Five** of the following :(two to three sentences) 10
 - A. Write the shelf-life and dose of *Churna Kalpana*.
 - B. Write the shelf-life and dose of *Khanda Kalpana*.
 - C. Write the definition of *Panaka Kalpana*.
 - D. Write the use of *Samshamani Vati*.
 - E. Write the ingredients of *Simhanada Guggulu*.
 - F. Write the use of *Guduchi Satva*.

SECTION-B

5. Enumerate *Maharasa Dravya*. Explain *Grahya Lakshana*, *Shodhana* and *Marana* of *Makshika*. 10
6. Answer any one out of two questions. 10
- A Define the word '*Parpati*'. Explain the manufacturing process of *Rasa Parpati* in detail.

OR

- B Define *Kharaliya Rasayana*. Explain the role of *Bhavana* in the preparation of *Kharaliya Rasayana*.
7. Write short notes on any **Four** of the following: 20
 - A. Concept of *Lohitakarana*.
 - B. 1st and 3rd *Samskara* of *Parada*.
 - C. Describe the *Varitar*, *Niruttha* and *Apunarbhava Bhasma Pariksha*.
 - D. *Hingulottha Parada*
 - E. *Shweta Parpati*
8. Answer any **Five** of the following :(two to three sentences) 10
 - A. Write the colour of *Abhraka.Bhasma*.
 - B. Write the *Grahya Lakshana* of *Shilajit*.
 - C. Write the ingredients of *Tribhuvan Kirti Rasa*.
 - D. Write the definition of *Satvapatana*.
 - E. Write the definition of *Marana*.
 - F. Write the *Vikara-nivarana* of *Tuttha*.

INSTITUTE OF TEACHING AND RESEARCH IN AYURVEDA, JAMNAGAR

B. PHARM. (AYU.) SECOND YEAR EXAMINATION - December - 2023

PHARMACEUTICAL ANALYSIS OF AYURVEDIC DRUGS

Date : 11/12/2023

Time : 02:30 P.M. - 05:30 P.M.

Monday

Marks : 100

- Instructions: 1. Every question is compulsory.
2. Every question bears the marks written on the right side.

SECTION-A

1. Explain extractive value in different solvent. 10
2. Answer any one out of two questions. 10
- A Discuss WHO-GMP guidelines of sampling of drugs.
- OR**
- B Define Refractive index and Explain evaluation of it by Abb's refractometer.
3. Write short notes on any **Four** of the following : 20
 - A. Determination of unsaturation in oil.
 - B. Disintegration test for tablet.
 - C. Sampling methods for solid.
 - D. Determination of volatile fatty acid.
 - E. Specific gravity.
4. Answer any **Five** of the following :(two to three sentences) 10
 - A. Give significance of Acid value.
 - B. Define Acid insoluble ash.
 - C. Define Acetyl value.
 - D. Give different instruments use for determination of Hardness of tablets.
 - E. Define Moisture content.
 - F. Define Foreign matter.

SECTION-B

5. Explain sugar estimation methods & narrate importance in drug analysis. 10
6. Answer any one out of two questions. 10
- A Give list of calcium containing drugs and explain estimation of calcium.
- OR**
- B Explain impact of fermentation variation in analytical profile of Asava preparation.
7. Write short notes on any **Four** of the following : 20
 - A. LOD for determination of moisture in Avaleha
 - B. Consistency characteristics of Avleha.
 - C. Estimation of alcohol content.
 - D. pH determination Asava and Arista preparation.
 - E. Total solid content in Asava and Arista preparation.
8. Answer any **Five** of the following :(two to three sentences) 10
 - A. Give qualitative test for mercury.
 - B. Benedict test for sugar.
 - C. Define Kshara with examples
 - D. Give difference between Asava and Arista preparation
 - E. Give qualitative tests for sulphur
 - F. Give five examples of Avleha and Paka preparations.

PHYSICAL PHARMACY AND PHARMACEUTICS

Date : 09/12/2023

Time : 02:30 P.M. - 05:30 P.M.

Saturday

Marks : 100

- Instructions: 1. Every question is compulsory.
2. Every question bears the marks written on the right side.

SECTION-A

1. Discuss standard free energy and the equilibrium constant. 10
2. Answer any one out of two questions. 10
 - A. Explain phase equilibria and phase rule.
 - B. Explain importance of rate of reaction in pharmacy.
3. Write a short note on any **Four** of the following : 20
 - A. Explain ideal and real solutions.
 - B. Partition of solute between two immiscible liquids.
 - C. Narrate various concentration expressions.
 - D. Explain Thixotropy.
 - E. Half life and shelf life.
4. Answer any **Five** of the following : (two to three sentences) 10
 - A. Define: - Enthalpy.
 - B. Chemical kinetics.
 - C. Name of any two Thixotropic agents.
 - D. Newtonian flow.
 - E. Sublimation.
 - F. Dipole moment.

SECTION-B

5. Explain in detail the methods of particle size determination? 10
6. Answer any one out of two questions. 10
 - A. Explain the derived properties of powders.
 - B. Discuss the methods of determination of surface tension?
7. Write a short note on any **Four** of the following : 20
 - A. Kinetic properties of colloidal dispersions.
 - B. Characteristics of dispersion phase.
 - C. Explain Angle of repose.
 - D. Differentiate between Flocculated and Deflocculated suspension.
 - E. Surface active agents & HLB.
8. Answer any **Five** of the following : (two to three sentences) 10
 - A. Define: Emulsion
 - B. Define lyophilic colloids. Give two examples.
 - C. Surface tension.
 - D. Adsorbent.
 - E. Zeta potential.
 - F. True density.

PHARMACEUTICAL BIOCHEMISTRY

Date : 08/12/2023

Time : 02:30 P.M. - 05:30 P.M.

Friday

Marks : 100

- Instructions: 1. Every question is compulsory.
2. Every question bears the marks written on the right side.

SECTION-A

1. Define and classify proteins. 10
2. Answer any one out of **two** questions. 10
- A Write a note on cell transport mechanisms.
- OR**
- B Write a note on enzyme inhibition.
3. Write short notes on any **Four** of the following : 20
 - A. Structural organization of proteins
 - B. Symbiont hypothesis
 - C. Structure and function of a. Nucleus b. Lysosome
 - D. RNA and it's types
 - E. Differential centrifugation
4. Answer any **Five** of the following :(two to three sentences) 10
 - A. Define epimers. Give examples.
 - B. What are unsaturated fatty acids? Give examples.
 - C. What is the principle of electrophoresis technique?
 - D. Define Beer's and Lambert's law.
 - E. Define a. Active site b. Km value
 - F. Write physiological uses of a. phospholipids b. Heparin

SECTION-B

5. Write in detail the gluconeogenesis cycle. 10
6. Answer any one out of **two** questions. 10
- A Write a note on xenobiotics.
- OR**
- B Write a note on free radicals and anti-oxidants.
7. Write short notes on any **Four** of the following : 20
 - A. F₁-F₀ ATPase
 - B. Glycogenolysis
 - C. Vitamin B₁
 - D. Obesity
 - E. Calcium as a micronutrient
8. Answer any **Five** of the following :(two to three sentences) 10
 - A. What is the major role of vitamin K?
 - B. Name the co-enzyme form of a. Vitamin B₁ b. Vitamin B₂.
 - C. What is the importance of the pathways: a. Urea cycle b. ETC
 - D. Define heavy metals. Give examples.
 - E. Write the full forms of a. PEM b. IDDM
 - F. Name the major disease caused by the deficiency of: a. Vitamin D b. Vitamin C

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B. PHARM. (AYU.) SECOND YEAR EXAMINATION - December - 2023

DRAVYAGUNA - I

Date : 06/12/2023

Time : 02:30 P.M. - 05:30 P.M.

Wednesday

Marks : 100

- Instructions: 1. Every question is compulsory.
2. Every question bears the marks written on the right side.

SECTION-A

1. Define *Dravya* and write its importance. 10
2. Answer any one out of two questions. 10
- A Discuss *Rasa* in detail.

OR

- B Explain *Prabhava* with suitable examples.
3. Write short notes on any **Four** of the following: 20
 - A. *Guruvadi Gunas*.
 - B. Explain the classification of *dravya* according to *Yonibheda*.
 - C. Differentiate *Shukrasthambhana* and *Shukrarechana*.
 - D. Explain *Karya-Karana bheda* and *Veerya bheda*.
 - E. Discuss *Vipaka* in brief.
4. Answer any **Five** of the following :(two to three sentences) 10
 - A. *Hridya*.
 - B. Define *Langhana*.
 - C. Write two examples of *Bruhaniya dravya*.
 - D. *Madakari*.
 - E. Write two examples of *Amla Rasa dravya*.
 - F. *Keshya*.

SECTION-B

5. Write detail about *Amalaki*. 10
 6. Answer any one out of two questions. 10
 - A Write botanical name, family, part used, dose and *rasa* of *Vibhitaki* and *Haritaki*.
- OR**
- B Write uses, any two formulations, habit, habitat and *veerya* of *Sunthi* and *Marich*.
 7. Write short notes on any **Four** of the following: 20
 - A. *Bruhatpanchamoola*.
 - B. *Trunapanchamoola*.
 - C. *Shadhaushna*.
 - D. Write *Karma* and *Prayoga* of *Nimba*.
 - E. Write brief description of any one *Hridya Dravya*.
 8. Answer any **Five** of the following :(Botanical name, family, part used and *veerya*) 10
 - A. *Nili*.
 - B. *Vata*.
 - C. *Japa*.
 - D. *Darbha*.
 - E. *Puga*.
 - F. *Twaka*.
