

Pharmaceutical Microbiology

Date: 21-02-2023
Tuesday

Time: 02:30 P.M. to 05:30 P.M.
Marks: 100

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

SECTION-A

1. Write in detail about Koch's Postulates. 10
2. Answer any one out of two questions. 10
 - A Draw structure of a bacteriophage and describe its properties.
 - B Describe classification of fungi based on its morphology with suitable examples.
3. Write short notes on any four of the following : 20
 - A. Morphological features of bacteria.
 - B. Definition of the terms "Transformation" and "Transduction"
 - C. Draw the structure of a typical prokaryotic flagellum and briefly give its mechanism of function.
 - D. Line diagram of an ideal fermentor and functions of its component parts.
 - E. Types of microscopic techniques.
4. Answer any five of the following : 10
 - A. Two examples of liquid bacteriological media.
 - B. What is IMViC test? State its principle.
 - C. Give example of catalase positive bacteria
 - D. Write full form of RT-PCR and PCR.
 - E. What is conjugation? Exemplify.
 - F. Give example of any two Gram positive bacteria and any two ssRNA viruses.

SECTION-B

5. What is sterilization? Describe physical methods for sterilization in brief. 10
6. Answer any one out of two questions. 10
 - A What are antigen-antibody reactions. Briefly describe giving suitable example.
 - B State principle of ELISA and give its functions.
7. Write short notes on any four of the following : 20
 - A. Write a briefly note on food borne intoxication.
 - B. What do you mean by the terms "Bacteriostatic" and "Bactericidal" properties?. Briefly describe giving suitable example of each.
 - C. Write a note on bioassay.
 - D. Write a note on Autoimmune diseases.
 - E. Briefly classify types of immune responses.
8. Answer any five of the following : 10
 - A. Enlist types of immunoglobulins.
 - B. Give example of chemical and biological indicators.
 - C. What is full form of RIA & IFT?
 - D. What is bacterial count? How would you do it?
 - E. Enlist methods for water purification.
 - F. What is hypersensitivity?

GUJARAT AYURVED UNIVERSITY, JAMNAGAR

B. Pharm(Ayu.) Second Year Examination : February-2023

Pharmaceutical Analysis of Ayurvedic Drugs - I

Date: 20-02-2023
Monday

Time: 02:30 P.M. to 05:30 P.M.
Marks: 100

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

SECTION-A

1. Role of sampling in pharma industry and explain sampling plan according to WHO-GMP. 10
2. Answer any one out of two questions. 10
 - A. Give classification of oils and fats and enumerate all the parameters to evaluate taila preparations and explain any two in detail.
 - B. What do you mean by physico-chemical analysis? Enumerate all the parameters you studied and explain specific gravity in detail.
3. Write a short note on any **Four** of the following : 20
 - A. Iodine value in oils and fats.
 - B. Hardness test for the tablets.
 - C. Acid value with its significance.
 - D. Total solid content in Draksharishta.
 - E. Refractive index as analytical tool.
4. Answer any **Five** of the following : (two to three sentences) 10
 - A. Define: - pH.
 - B. Enumerate 5 formulations containing calcium.
 - C. Define: - Foreign matter.
 - D. Importance of saponification value.
 - E. In which kind of formulation we can perform loss on drying? Name it.
 - F. Polensky value.

SECTION-B

5. How calcium is estimated from "kapardika bhasma"? Explain in detail. 10
6. Answer any one out of two questions. 10
 - A. Explain determination of volatile oil from avleha preparation.
 - B. Explain determination of arsenic estimation from somnathi tamra bhasma.
7. Write a short note on any **Four** of the following : 20
 - A. Qualitative tests for sodium, potassium, mercury and chloride.
 - B. Classical parameters to evaluate quality of bhasma.
 - C. Classical parameters as well as modern parameters to know the onset of fermentation.
 - D. Short note on pH value.
 - E. Total sugar estimation in brief.
8. Answer any **Five** of the following : (two to three sentences) 10
 - A. Why glasswool is used for filtration at some place?.
 - B. Write down four examples of churna containing volatile oil.
 - C. Define: Reducing sugar
 - D. Define: L.O.D.
 - E. Who invented pH scale?
 - F. Enumerate parameters for evaluation of sandhan preparations.

Physical Pharmacy and Pharmaceutics

Date: 17-02-2023
Friday

Time: 02:30 P.M. to 05:30 P.M.
Marks: 100

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

SECTION-A

1. Define chemical kinetics and give its applications in detail. 10
2. Answer any one out of two questions. 10
 - A. Define adsorption isotherm & discuss types of isotherm.
 - B. Explain applications of heat of combustion in detail.
3. Write a short note on any **Four** of the following : 20
 - A. Phase rule.
 - B. Narrate various concentration expressions.
 - C. Differentiate between zero and first order reaction with suitable examples.
 - D. Methods of determination of order.
 - E. Enthalpy of reaction.
4. Answer any **Five** of the following : (two to three sentences) 10
 - A. Entropy.
 - B. Enthalpy.
 - C. Optical activities.
 - D. Dipole moment.
 - E. Sublimation.
 - F. Refractive index.

SECTION-B

5. Discuss concepts & various factors influencing the viscosity. 10
6. Answer any one out of two questions. 10
 - A. Describe the process of detergency and role of HLB scale in that.
 - B. Explain non-newtonian type of flow with rheograms, mechanisms and suitable examples.
7. Write a short note on any **Four** of the following : 20
 - A. Application of surface active agents.
 - B. Difference between physical and chemical adsorption.
 - C. What are methods of particle size determination?
 - D. Describe andersen pipette method of analysing the partical size.
 - E. Spreading coefficient.
8. Answer any **Five** of the following : (two to three sentences) 10
 - A. Surface free energy.
 - B. HLB scale.
 - C. Surfactant.
 - D. Angle of repose.
 - E. Pseudo plastic.
 - F. Micromeritics.

Pharmaceutical Biochemistry

Date: 16-02-2023
Thursday

Time: 02:30 P.M. to 05:30 P.M.
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 lipids. 10
2. Answer any one out of two questions. 10
 - A. Draw and explain the structure and types of DNA.
- OR**
- B. Enlist differences between eukaryotes and prokaryotes.
3. Write short notes on any **Four** of the following : 20
 - A. Functions of proteins
 - B. Polysaccharides
 - C. Structure and functions of Nucleus and Golgi bodies
 - D. Competitive inhibition
 - E. Symbiont theory of origin of mitochondria and chloroplast.
4. Answer any **Five** of the following :(two to three sentences) 10
 - A. What is absolute specificity and group specificity of an enzyme?
 - B. Define Beer's and Lambert's law.
 - C. Justify "mitochondrion is of maternal origin".
 - D. Define carbohydrates. Give examples.
 - E. Define enzymes. Give examples.
 - F. What is D- and L- amino acid?

SECTION-B

5. Write note on pentose phosphate pathway. 10
6. Answer any one out of two questions. 10
 - A. Write a note on Vitamin B₃ and B₆.
- OR**
- B. Define PEM. Write a note on Kwashiorkor.
7. Write short notes on any **Four** of the following : 20
 - A. Definition of xenobiotics and phase II reactions
 - B. Complex I of Electron transport chain
 - C. Scurvy
 - D. Atherosclerosis.
 - E. Iron as micro nutrient.
8. Answer any **Five** of the following :(two to three sentences) 10
 - A. Enlist functions of vitamin E.
 - B. Which coenzyme is used for the carboxylation processes and one carbon transfer?
 - C. How many ATPs are generated when an NADH and FADH₂ are oxidized?
 - D. What are the typical symptoms seen in diabetes.
 - E. Name the cycle which does:
 - a. oxidation of fatty acids
 - b. synthesis of glucose from non-carbohydrate precursors
 - F. Name vitamins which have antioxidant property.

GUJARAT AYURVED UNIVERSITY, JAMNAGAR

B. Pharm(Ayu.) Second Year Examination : February-2023

Pharmacognosy of Ayurvedic Drugs – I

Date: 15-02-2023
Wednesday

Time: 02:30 P.M. to 05:30 P.M.
Marks: 100

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

SECTION-A

1. What is Root ? Discuss its various types in detail. 10
2. Describe the diagnostic characters of Fabaceae family and give the morphological characters of any one medicinal plant belongs to it. 10

OR

Give detail account on classification of plant kingdom.

3. Write short notes on any **Four** of the following : 20
A. Shapes of leaf.
B. Give botanical description of Guduchi.
C. Sexual propagation with its advantages and disadvantages.
D. Placentation.
E. Discuss mineral as a source of drugs.
4. Answer any **Five** of the following :(two to three sentences) 10
A. Vacuum dryer.
B. Give uses of Shankhapushpi.
C. Define Samara.
D. What do you mean by Binomial nomenclature ?
E. Give floral key of Cruciferae.
F. Give name of two plants belonging to Liliaceae family.

SECTION-B

5. Define Pharmacognosy. Discuss various types of classification of crude drugs in detail. 10
6. What is tissue ? Discuss its various types. 10

OR

What are Carbohydrates ? Give detail classification of carbohydrates with suitable examples.

7. Write short notes on any **Four** of the following : 20
A. What is monocot Root ? Draw diagrammatic section label and describe it in short.
B. Discuss xylem in detail.
C. Discuss various types of stomata.
D. Galo Satva.
E. Homeopathy system of medicine.
8. Answer any **Five** of the following :(two to three sentences) 10
A. Enumerate different parts of the plant.
B. Define sclerenchyma.
C. What is Unani system of medicine ?
D. Define unorganised drugs.
E. Preparation of Karaya gum.
F. Give biological source and uses of Methika.

GUJARAT AYURVED UNIVERSITY, JAMNAGAR

B. Pharm(Ayu.) Second Year Examination : February-2023

Rasashastra & Bhaishajya Kalpana – II (Ayurvedic Pharmaceutics)

Date: 13-02-2023
Monday

Time: 02:30 P.M. to 05:30 P.M.
Marks: 100

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

SECTION-A

1. Describe Guggulu kalpana in detail. 10
2. Answer any one out of two questions: 10
 - A. Describe Varti kalpana with an example.

OR

 - B. Describe an example of avleha kalpana.
3. Write short notes on any **Four** of the following : 20
 - A. Guda paka.
 - B. Gulab sharkar.
 - C. Method and types of Vati kalpana.
 - D. Churna kalpana.
 - E. Describe an example of Vati with guda.
4. Answer any **Five** of the following :(two to three sentences) 10
 - A. What is the other name of Sanshamni vati.
 - B. Dose and use of Triphala guggulu.
 - C. Shelf life of Avleha kalpana.
 - D. What is Vyosha in Vyoshadi vati?
 - E. Ingredients of Simhanad guggulu.
 - F. How is Vyoshadi vati used?

SECTION-B

5. Define Parpati and explain it in detail. 10
6. Answer any one out of two questions. 10
 - A. Describe Bhasma pariksha

OR

 - B. Describe Rasaka in detail.
7. Write short notes on any **Four** of the following : 20
 - A. Abhraka maran
 - B. Shilajit shodhan.
 - C. Kajjali.
 - D. Concept of Maran.
 - E. Makshika.
8. Answer any **Five** of the following :(two to three sentences) 10
 - A. What is the colour of Tribhuvankirti rasa and why?
 - B. Ingredients of Sveta parpati with their proportion.
 - C. Dose and use of Tribhuvankirti rasa.
 - D. Name five methods of shodhan.
 - E. Two formulations of Shilajit.
 - F. Colour of Abhraka bhasma.

GUJARAT AYURVED UNIVERSITY, JAMNAGAR

B. Pharm(Ayu.) Second Year Examination : February-2023

Dravyaguna – I (Ayurvedic Pharmacology)

Date: 14-02-2023
Tuesday

Time: 02:30 P.M. to 05:30 P.M.
Marks: 100

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

SECTION-A

1. What is Rasa? Write its types, panchabhautic composition and properties in detail. 10
 2. Answer any one out of two questions. 10
 - A. Write classification of Aushadha Dravya according to Shustrut.
- OR**
- B. Define Vipak and give its types and Karma on Doshas and also mention how Vipak is Different from Rasa?
3. Write short notes on any **Four** of the following : 20
 - A. Give detail about importance of Dravyaguna Shastra.
 - B. Panchabhautik relationship of Dravya.
 - C. Ahardravya classification according to Charaka.
 - D. Virechana.
 - E. Classification of Guna.
 4. Answer any **Five** of the following :(two to three sentences) 10
 - A. Jivaniya.
 - B. Classification – Prayogabheda.
 - C. Vamanopag .
 - D. Definition of Dravya.
 - E. Sheeta and Ushna guna Dravya.
 - F. Dahaprashman.

SECTION-B

5. Give detail information about Draksha. 10
 6. Answer any one out of two questions. 10
 - A. Define Kantakpanchamoola and Madhyampanchamoola with its Latin name and collective actions.
- OR**
- B. Write botanical name, synonyms, Rasapanchak, part used and main action of two Leguminosae drugs.
7. Write short notes on any **Four** of the following : 20
 - A. Give Part used, family, synonyms, dose and habitat of any one Chedan dravya.
 - B. Chaturbeeja
 - C. Shadushana
 - D. Give Part used, family, synonyms, formulations and habit of Bhringaraja.
 - E. Give botanical name, family, part used, veerya and main action of Amra.
 8. Answer any **Five** of the following :(two to three sentences) 10
 - A. Formulation and morphology of Yastimadhu.
 - B. Trikatu
 - C. Trimada
 - D. Latine name of Dravya Kantakaridvya.
 - E. Synonyms of Haritaki.
 - F. Formulation and dose of Brahmi.
