INSTITUTE OF TEACHING AND RESEARCH IN AYURVEDA

[INSTITUTE OF NATIONAL IMPORTANCE]

MINISTRY OF AYUSH, GOVERNMENT OF INDIA

B. PHARM. (AYU.) IV YEAR

PHARMACUETICAL ANALYSIS OF AYURVEDIC DRUGS-III

Question Bank

Chapter: 1
Standardisation and Quality Control of Ayurvedic drugs. Introduction and background.

[10 marks]

1. What do you mean by standardisation? What is Standard? Explain in terms of Ayurvedic formulation.
2. Define Quality control as per the WHO –GMP. How will you control the quality of ayurvedic formulations? Explain in brief.
3. What do you understand by standardisation of drugs? Which parameters will youadopt for standardisation of ASAVA preparations? Explain in brief.
1. Narrate the following Paradigm – Quality control, Quality assurance andstandardization.
4. Narrate the paradigm of finish product standardisation.

[5 marks]

1. Define Quality control as per WHO-GMP. Describe it in brief.
2. Define Standardisation. Explain pharmaceutical standardisation in brief
3. Differentiate between Q.C. & Q.A.

[2 marks]

1. Define : QUALITY
2. Define: Quality Assurance
3. Define: Quality control
4. Define: Standard
5. Define: Standardisation
6. Define: Validation

Chapter: 2
Parameters included in Ayurvedic pharmacopoeia of India

[10 marks]

1. What is Pharmacopoeia? Enumerate parameters included in Ayurvedic pharmacopoeia of India. Explain any four in detail.
2. Explain determination of volatile oil in drugs according to pharmacopoeia.

3. Enumerate parameters used to standardise the Oil preparation and explain anyfour of them in detail.
4. How will you estimate the % of Alcohol from Ushirasava as per the pharmacopoeia? Explain with diagram.
5. Describe the profroma of Ayurvedic Pharmacopoeia of India. How many volumes published till date? Explain any four parameters in detail.

[5 marks]

1. Pharmacopoeial parameters for Avaleh and Paka.
2. Describe Acid insoluble ash with its significance.
3. L.O.D. for Vasavaleha
4. Saponification Value with its procedure.
5. How will you perform Iodine value in Mahanaryan tail.
6. Describe procedure for R.I. of Jatyadi ghrita
7. Qualitative tests for TANNINS.
8. R.M.P.K. values
9. Abbe's refractometer

[2 marks]

1. Define : Specific gravity
2. Define: Refractive Index
3. Definition of Peroxide Value
4. Definition of foreign matter.
5. Define Acid value.
6. Define Saponification Value.
7. Define Iodine Value.
8. Define Ash value.
9. Define: Pharmacopoeia
10. Define: Monograph
11. Reducing Sugar
12. Non reducing Sugar.
13. Enumerate 5 Asav-Arishta containing volatile oil.
14. Enumerate few Avaleha preparation containing Alkaloids.

Chapter: 3

Standardization of raw materials, finished products and packaging material.

[10 marks]

1. What is standardisation? Describe the plan to standardise the raw materials andexplain it in brief.
2. How will you standardise the Kshirbala taila? Describe all parameters in brief.
3. Why there is need of Standardisation of Ayurvedic drugs? What parameters youwill decide for Standardisation of Asava?
4. Enumerate Standardisation parameters for Avaleha and Paka preparation anddescribe any four of them in details.
5. What is the difference between avaleha and paka? Enumerate classical parameters to

evaluate the avaleha preparations and describe the loss on dryingfor it in detail.

6. Describe Quality control measures for preparing a Churna preparation. Which parameters are required to be established for fine Churna ?
7. How will you standardise the primary packaging materials for different formulations of Ayurveda? Explain with suitable examples.
8. How will you standardise the Packaging material used for Asav – Arishta? Explainwith reason that why glass container is most suitable for it.

[5 marks]

1. What is Standardisation? Why it is necessary for ayurvedic formulations?
2. Enumerate WHO-GMP guidelines for quality control of herbal drugs. Explain inbrief.
3. Enlist parameters used for standardisation of Bhasma preparations.

Chapter: 4
Process standardisation.

[10 marks]

1. What do you mean by process standardisation? How will you establish the process standardisation for Churna Preparation?
2. Explain the process standardisation of any one ayurvedic formulation with suitable example and details.
3. What is the role of S.O.P. in process standardisation? How will you prepare the S.O.P. for manufacturing of Oil preparations.

Chapter: 5
In process Control.

[10 marks]

1. What is In process control? How it affects the final quality of the preparation? Explain with suitable example.
2. What is the need of in process control in certain Ayurvedic formulations? Enumerate the in process control steps for taila preparations.
3. Explain the concept of In process control with suitable examples in pharmaceutical industry.

Chapter: 6
Good Laboratory Practices.

[10 marks]

1. What is CGLP? Explain the GLP as applicable to Ayurveda drug industry.
2. Explain the concept of GLP and why it is necessary? Explain in detail.
3. Discuss GLP with special reference to herbal preparations.
4. What is importance of SOP's in Ayurvedic formulation. Explain various steps forthe validation of an Analytical process.

[5 marks]

1. Discuss importance of documentation in GLP.
2. Importance of G.L.P.
3. Explain S.O.P. in brief
4. Importance of S.O.P. in G.L.P.

Chapter: 7
Good Manufacturing Practice

[10 marks]

1. What is CGMP? Explain the GMP as applicable to Ayurveda drug industry.
2. What is the importance of GMP in Ayurvedic drug industry, give details of
3. GMP standards for finished pharmaceuticals.
4. Write the procedures describing the handling of all written and oral complaints regarding a drug product as per G.M.P.
5. Explain the importance of GMP in Ayurvedic drug industry. Describe factory premises requirement according to GMP.
6. Give essential features of an Ayurvedic drug industry. Explain quality controlaspect in detail.
7. Documentation of raw material inventory according to GMP.
8. Discuss GMP with reference to personal training for staff.
9. GMP in context to ISM drugs.

[5 marks]

1. Discuss importance of documentation in GMP.
2. Raw material stores according to GMP.
3. Location and Surroundings according to GMP.
4. Building requirements according to GMP
5. Q.C. as per the G.M.P.
6. Health, sanitation and hygiene of workers as per GMP.

Chapter: 8
Introduction, Instrumentation and applications of N.M.R. & Mass Spectrophotometryas applicable to Ayurvedic drugs.

[10 marks]

1. Define chemical shift in NMR. Explain its instrumentation with diagram inbrief. Write down its application also.
2. Explain theprinciple of NMR spectroscopy. Explain shielding and deshielding effects in NMR. What is chemical shift?
3. What is Mass spectroscopy? Describe its applications. What are thedifferent peaks obtained in Mass spectroscopy?
4. Write the instrumentation of N.M.R. Spectroscopy with diagram and explainits

applications.

[5 marks]

1. Why T.M.S. is used as internal standard?
2. Shielding and deshielding effects in NMR.
3. Applications of N.M.R. in brief
4. Applications of Mass spectroscopy in brief.
5. Principle of Mass spectroscopy.
6. Spin-spin coupling inNMR.
7. Fragmentation in mass spectra.
8. Magnetic anisotropy.

[2 marks]

1. TMS
2. Transducer
3. Paramagnetic shift and diamagnetic shift.

Chapter: 8
Introduction, Instrumentation and applications of Atomic absorption spectroscopy (A.A.S.) as applicable to ayurvedic Drugs.

[10 marks]

1. Differentiate between A.A.S. & A.E.S. Explain the instrumentation of A.A.S.with diagram
2. Explain functions of Hallow cathode lamps in AAS.
3. Atomic absorption spectroscopy, its method, advantages and usage inanalysis of metallic preparation.
4. What are the components of an Atomic absorption spectrophotometer.Give important applications of AAS.

[5 marks]

1. Applications of A.A.S. in brief.
2. Hollow cathode lamp and chopper in A.A.S.
3. Instrumentation of A.A.S. in brief.
4. Burner system in AAS.

[2 marks]

1. H.C.L.
2. Chopper

Chapter: 8
Analysis of Milk, Honey and Tea.

[5 marks]

1. Sugar estimation in Honey.

2. Estimation of fat content in Milk.
3. Estimation of Nitrogen content in Tea Leaves.
4. Estimation of Tannin in Tea Leaves.
5. Vitamin B complex.
6. Vitamin C in Detail.
7. Adulteration tests of Honey.

[2 marks]

1. Test for Un boiled milk.
2. Test for artificial invert sugar.
3. Test for preservatives in milk.
4. Sources of Vitamin A.
5. Sources of Vitamin D.
6. Sources of Vitamin E.