	Utech
Name :	
Roll No.:	To the same of the
Invigilator's Signature :	

CS/M.Pharm/SEM-2/MPT-202(2)/2013

2013

HERBAL DRUG DEVELOPMENT AND STANDARDIZATION

Time Allotted: 3 Hours Full Marks: 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP - A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for any *ten* of the following:

 $10 \times 1 = 10$

- i) Which one of the following substances constitute neutraceuticals?
 - a) Prebiotic
- b) Antioxidant

c) PUFA

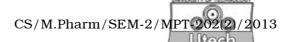
- d) All of these.
- ii) Who coined the term 'Aromatherapy'?
 - a) Dr. Edward Bach
- b) Prof. Gantlefase
- c) Greenish and Collin
- d) Stass and Otto.
- iii) Which one of following methods is the best method for obtaining volatile oil from flower petals?
 - a) Hydro-distillation
- b) Eculle process
- c) Enfluerage process
- d) All of these.

30810(M.Pharm)

[Turn over

CS/M.Pharm/SEM-2/MPT-202(2)/2013

- Volatile oils are generally composed of iv) Polyphenolic compounds b) Mono and Sesquiterpenes c) Alkaloids Glyceryl ester of fatty acids. d) v) The basic concept of diagnosis and drug development in Ayurveda is based on Mono Dasha theory b) Tri Dasha theory Hexa Dasha theory Octa Dasha theory. c) d) Which one of the following parameters is used for evaluation of the purgative activity of the drug? Foaming index b) Swelling index a) c) Haemolytic index d) All of these. vii) Which one of the best method of standardizing herbs and herbal formulation is based on modern scientific tools? Chemical test b) Chromatography a) c) Spectrophotometry d) Biological Assay. viii) Which one of the following substances is used to improve the gut health? **Probiotics**
 - Enzymes b) a)
 - Vitamins d) None of these. c)
- Which one of the following solvents is used in supercritical fluid extraction?
 - a) Water b) Chloroform
 - Carbon dioxide d) Nitrogen. c)



- x) Which one of the following drug constituents is used as marker of *Garcinia combogia*?
 - a) Curcumin
- b) Allicin
- c) Capsanthin
- d) Hydroxy citric acid.
- xi) Which one of the following screening is used for evaluation of natural products?
 - a) Sandberg screening
 - b) Samuel screening
 - c) Malone and Robichaud screening
 - d) Hippocratic screening.

GROUP - B

(Short Answer Type Questions)

Answer any *three* of the following.

 $3 \times 5 = 15$

- 2. Define volatile oil. Discuss the commercial utilization and pharmaceutical application of volatile oil in different ways.
- 3. Write short notes on the following:
 - (i) Antioxidants
 - (ii) Dietary fibres.
- 4. Define taste enhancer with examples. Write the importance of taste enhancer in different Ayurvedic pharmaceutical formulations.
- 5. Discuss the basic needs for manufacturing of Ayurvedic medicine in GMP.
- 6. Briefly discuss the standardization of Homeopathic medicine.

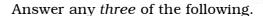
30810(M.Pharm)

3

[Turn over



(Long Answer Type Questions)





- 7. a) Write the importance and also the problem of Indian medicinal plant based industry.
 - b) Classify the medicinal plant based industry. $7\frac{1}{2} + 7\frac{1}{2}$
- 8. a) What is Hippocratic screening for evaluation of herbal drugs?
 - b) Write the biological screening method of hoppoprotective drug. 5 + 10
- 9. Define neutraceuticals. What is the importance of neutraceuticals in various diseases? Classify neutraceuticals on the basis of the therapeutically important compounds.

2 + 5 + 8

- 10. Define bioassay. Classify bioassay. What is the principle of bioassay ? Write the importance of LD_{50} and ED_{50} in dosage calculation of drugs. 2+4+4+5
- 11. What is standardization of Ayurvedic drugs? What are the parameters employed in the standardization of Ayurvedic drugs? What are the problems involved in standardization of herbal drug. 3 + 8 + 4

30810(M.Pharm)