



Name :

Roll No. :

Invigilator's Signature :

CS/M.PHARM/SEM-2/MPT-202(2)/2012

2012

**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 × 1 = 10

- i) Who is the largest producer of limonene in the World Market ?
- a) American Phytochemical Industry
 - b) Brazilian Phytochemical Industry
 - c) Chinese Phytochemical Industry
 - d) Indian Phytochemical Industry.
- ii) Which one of the following volumes contains standards of 910 drugs recommended by the Homoeopathy Pharmacopoeia Committee ?
- a) 2 volumes
 - b) 4 volumes
 - c) 6 volumes
 - d) 7 volumes.

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- iii) Who innovated "nutraceutical" as a latest term for health food ?
- a) Stephen Deffice b) John Samuel
c) Malone d) Sandberg.
- iv) Which one of the following drugs is an analogue of diosgenin ?
- a) Hecogenin b) Sarsapogenin
c) Salasodine d) None of these.
- v) In which year, Dietary Supplement Health and Education Act (DSHEA) has passed the dietary supplement as health food ?
- a) In 1990 b) In 1991
c) In 1992 d) In 1994.
- vi) Which one of the following substances is used as probiotic, which improves the intestinal microbial balance ?
- a) Insulin b) Lactobacilli species
c) *E. coli* d) None of these.
- vii) Which one of the following years, opium came into laws of Narcotic Drugs and Psychotropic Substances Act ?
- a) 1982 b) 1983
c) 1984 d) 1985.
- viii) Which one of the following application forms is applied to the licensing authority for license to manufacture of AUS drugs ?
- a) 24-D b) 24-E
c) 25-D d) 25-E.



- ix) Which one of the following drugs constituent is used as marker of Coleus forskohil ?
- a) Forskohin
 - b) Forskolin
 - c) Allicin
 - d) None of these.
- x) Which of the following techniques is for determining the concentration, potency and microbiological activity of substance ?
- a) Chemical asseay
 - b) Biological assay
 - c) Physical assay
 - d) All of these.
- xi) What is the full form of ELISA ?
- a) Enzyme-liposome immunosorbent adsorbent
 - b) Enzyme-lipase immunospecific adsorbent
 - c) Enzyme-linked immunosorbent assay
 - d) All of these.
- xii) Which of the following methods is best used for extraction of thermostable crude drugs ?
- a) Maceration
 - b) Percolation
 - c) Hot continuous percolation
 - d) Infusion.



GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

2. Define health food. What is the composition of health food ? Name the major diseases which are prevented or treated by health food.
3. Write down the importance of volatile oil in pharmaceutical industry.
4. What are the scientific names and marker constituents of Garcinea, Garlic, Turmeric, Curcuma and capsicum ?
5. Write short notes on the following :
 - i) PUFA
 - ii) Dietary fibres.
6. Define taste enhancer. Write the physiology of taste and importance of taste enhancing agent with volatile oil as flavouring agent in pharmaceutical formulation.

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

7. Discuss the herbal drug regulation in India with reference to the constitution of the board of AUS drugs Technical Advisory Board and Drug consultative committee.
8. What are the requirements of factory premises and hygienic condition and also prohibition of manufacture and sale of AUS drugs according to Drugs and Cosmetic Act, 1940 ?
9. What is bio-assay ? In what conditions bioassay is performed as one of the evaluation method ? What is the principle of bioassay ? Discuss shortly the types of animal assay.
 $2 + 3 + 3 + 7$
10. What is Hippocratic screening for evaluation of herbal drugs ? Discus briefly the evaluation of anti-diabetic agents.
 $5 + 10$
11. Justify the words "herbs as functional food" with example. Discuss the process and parameters employed in the standardization of herbal formulations.
 $7 \frac{1}{2} + 7 \frac{1}{2}$

