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Azara, Halki, Barapara,
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2020

B.Pharm. 6th Semester End-Term Examination

Pharmacy

HERBAL DRUG TECHNOLOGY

(New Regulation)

Full Marks – 75

Time – Three hours

The figures in the margin indicate full marks
for the questions.

Answer the following: (Multiple choice questions)

(20 × 1 = 20)

1. (i) Which of the following is commonly used plant biopesticides?

- (a) Datura (b) Fenugreek
(c) Pyrethrum (d) Digitalis

(ii) In secondary processing of herbal raw material, fumigation is mostly done with which of the following oxides of sulphur?

- (a) SO (b) SO₂
(c) SO₃ (d) S₂O₂

(iii) In Ayurvedic principles, which of the following is NOT a PANCHAMAHA-BHUTA?

- (a) Jala (b) Vipaka
(c) Prithvi (d) Agni

[Turn over

- (iv) What type of preparations are Aristas and Asavas?
- (a) Semisolid dosage forms
 - (b) Powders
 - (c) Alcoholic preparations
 - (d) Tablets
- (v) Which of the following is true for Poly-unsaturated fatty acids (PUFA's)?
- (a) Helps to fight cancer
 - (b) Helps to reduce bad cholesterol levels
 - (c) Helps to prevent infection
 - (d) Helps to fight viral disease
- (vi) What type of drugs should be avoided while taking foods and 'vegetables which are rich in Vitamin K?
- (a) Antihypertensive drugs
 - (b) Anticoagulant drugs
 - (c) Antibacterial drugs
 - (d) Antidiarrhoeal drugs
- (vii) Which of the following herbs is used as a natural sweetener?
- (a) Amaranth
 - (b) Sandal wood
 - (c) Guar gum
 - (d) Stevia
- (viii) Which of the following herbs is used in cosmetics as a hair colorant?
- (a) Fraxinus ornus
 - (b) Glycyrrhiza glabra
 - (c) Lawsonia inermis
 - (d) Stevia rebaudiana

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- (ix) Stability testing of drugs is required to determine
- (a) Toxicity
 - (b) Drug interaction
 - (c) Shelf life
 - (d) None of the above
- (x) In case study of Neem, patent was claimed for which of the following activity?
- (a) Fungicide
 - (b) Anticancer
 - (c) Antiviral
 - (d) Antiprotozoal
- (xi) Foaming index is evaluated for drugs containing _____
- (a) Bitter components
 - (b) Saponin components
 - (c) Proteins components
 - (d) Alkaloidal components
- (xii) Which of the following is true for 'Schedule T'?
- (a) Good manufacturing practice for Indian system of medicine (Ayurvedic, Siddha and Unani)
 - (b) Good packaging practice for Indian system of medicine (Ayurvedic, Siddha and Unani)
 - (c) Standards for cosmetics
 - (d) Standards for ophthalmic preparations
- (xiii) What is the full form of 'IPR'?
- (a) Indian Property Rights
 - (b) Internal Property Rights
 - (c) Intellectual Property Rights
 - (d) Intellectual Privacy Rights
- (xiv) Which of the following is a natural binding agent?
- (a) Amaranth
 - (b) Acacia
 - (c) Caramel
 - (d) Lanolin

(xv) What is the minimum space required for the manufacturing of Churna?

- (a) 250sq. feet
- (b) 200 sq. feet
- (c) 120 sq. feet
- (d) 100 sq. feet

(xvi) Which of the following is NOT an Herbal Industry?

- (a) Dabur India Ltd
- (b) Zandu Pharmaceuticals Ltd
- (c) The Himalaya Drug Co
- (d) None of the above

(xvii) What is the full form of 'ICH'?

- (a) Indian Conference on Harmonization
- (b) Indian Convention on Harmonization
- (c) International Conference on Harmonization
- (d) International Convention on Harmonization

(xviii) Which of the following is true for 'BIOPIRACY'?

- (a) Stealing of knowledge without proper authorization from indigenous people
- (b) This is the right given to farmers for the improvement of plants
- (c) It is a right granted to the breeders for plantation
- (d) None of the above

(xix) "*Similia Similibus Curantur*" is the basic principles confine to which of the following?

- (a) Ayurvedic System of Medicine
- (b) Unani System of Medicine
- (c) Siddha System of Medicine
- (d) Homeopathic System of Medicine

(xx) Antioxidants are substances which are responsible for _____

- (a) Killing the microbes
- (b) Scavenge the free radicals
- (c) Providing energy
- (d) Promoting cell division

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2. Answer any seven questions:

(7 × 5 = 35)

- (a) Define herbal medicine. Describe the different sources for proper selection of herbs. (1+4)
- (b) Match the following herbs with rich active principles which are used as health foods: (5)

Group A

Group B

- | | | |
|-----------------|-----|---------------------------|
| (i) Alfalfa | (1) | Rich in Vitamin C |
| (ii) Fenugreek | (2) | Rich in Withanine |
| (iii) Garlic | (3) | Rich in Trigonelline |
| (iv) Amla | (4) | Rich in Medicagenic acid |
| (v) Ashwagandha | (5) | Rich in allin and allicin |

- (c) Define Nutraceuticals. Classify nutraceuticals based on their chemical and therapeutic properties and describe the role of nutraceuticals in the management of diabetes. (1+2+2)
- (d) Define herbal cosmetics and herbal excipients. Classify the different types of herbal cosmetics and herbal excipients with examples. (1+2+2)
- (e) Enumerate the different types of herbal formulations. Write a note on novel dosage forms taking into account 'Phytosomes'. (2+3)
- (f) Write a note on the constitution of regulatory board for ASU-DTAB and ASU-DCC. (2.5+2.5)
- (g) Give the scope of herbal medicine and classify herbal drug industries. Enumerate the names of at least five institutions involved in research on herbal medicines in India. (1+2+2)
- (h) Write a note on Schedule-T. (5)
- (i) Define the terms: Biopiracy, patent, organic farming. (2+2+1)

3. Answer any TWO questions

(2 × 10 = 20)

- (a) Give the basic principles of Ayurvedic and Homeopathic system of medicines. Describe in detail the methods of preparation and standardization of Ayurvedic formulations taking into account Arista and Churna. (1.5+1.5+3+4)
- (b) Define drug interaction and describe the mechanism underlying behind drug interaction. What are the different types of herbal drug interaction? Describe in detail the adverse interaction of Black pepper. (1+2+3+4)
- (c) Explain in detail the different parameters incorporated in WHO guidelines for assessing the quality of herbal drugs with examples. (10)
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