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2021

**B.Pharm. 7<sup>th</sup> Semester (Repeater) Examination**

**Elective — HERBAL DRUG TECHNOLOGY AND PHARMACOLOGICAL SCREENING**

**(Old Regulation)**

Full Marks – 100

Time – Three hours

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

Answer question No. 1 and any six from the rest.

1. Multiple choice question : (10 × 1 = 10)

(i) What do you know about the *in silico* model in pharmacological study?

- (a) In vivo animal study
- (b) Invitro study
- (c) CADD
- (d) Enzyme inhibition

(ii) CPCSEA is formed in the year

- (a) 1964
- (b) 1960
- (c) 1970
- (d) 1974

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- (iii) A HPLC injector provide injection of the liquid sample within the range of
- (a) 0.1-50mL
  - (b) 0.2-50mL
  - (c) 0.1-100mL
  - (d) 0.2-100mL
- (iv) Counter current distribution is a \_\_\_\_\_ extraction process.
- (a) Liquid-liquid
  - (b) Liquid solid
  - (c) Liquid-gas
  - (d) None of above
- (v) Animal toxicity study comes under the schedule
- (a) Schedule P
  - (b) Schedule Y
  - (c) Schedule W
  - (d) Schedule M
- (vi) Van-Urk reagent is used to detect
- (a) Ergot alkaloid
  - (b) Cinchona alkaloid
  - (c) Tropane alkaloid
  - (d) (b) and (c)
- (vii) Papya latex is used to induce
- (a) Inflammation
  - (b) Arthritis
  - (c) Pain
  - (d) Swelling

(viii) "Knockout mice" used in pharmacological screening are

- (a) Genetically modified bread
- (b) Devoid of some gene
- (c) Mutated natural species
- (d) None of these

(ix) The anthraquinone content of the drugs tested by

- (a) Warming with glacial acetic acid giving red precipitate
- (b) Shaking the extract made by organic solvent with diluted ammonium hydroxide the water phase gives red or orange colour
- (c) Extracting with water and precipitate with lead acetate showing blue colour
- (d) Making a water extract which shows green colour on sulphuric acid

(x) Aloxan is used to induced

- (a) Inflammation
- (b) Hyperglycemia
- (c) Hypoglycemia
- (d) Pyrexia

2. (a) Write in brief about the OECD guidelines used to determine the acute toxicity study. (7)

(b) Describe the pharmacological screening procedure of anti-diabetic drugs obtained from plant origin. (8)

3. What do you mean by pharmacological screening of herbal drug? Describe any two pharmacological screening procedure of analgesic drugs obtained from plant origin. (6 + 9)

4. (a) Describe in detail about High Performance Liquid Chromatography. (8)

(b) Write briefly about flash chromatography. Explain the advantages of flash chromatography over conventional method of isolation. (4 + 3)

5. (a) Write down various method of extraction of volatile oils. (7)  
(b) Describe Gel permeation chromatography. (4)  
(c) Enumerate the importance of ash and extractive value. (4)
6. Write bioassay of : (3 × 5 = 15)  
(a) Oxitocin  
(b) Heparin  
(c) Digitalis
7. (a) What is Supercritical fluid extraction? (5)  
(b) How the safety margin of herbal drug is maintained as per WHO guidelines? (4)  
(c) Mention the WHO guidelines for general limits of contaminants in herbal drugs. (6)
8. (a) Write in details about Soxhlet extraction process with diagram. (7)  
(b) How will you perform Thin Layer Chromatography? (5)  
(c) What do you mean by retention time? (3)
9. Write short notes on : (3 × 5 = 15)  
(a) Herbal cosmetics  
(b) Thalloquine test  
(c) Estimation of Tannin in herbal formulation.
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