Name : .....

Roll No. : .....

Invigilator's Signature : .....

CS/B.PHARM/SEM-8/PT-802/2010

2010

PHARMACOGNOSY

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) Sulphated ash is

a) ash of sulphur

b) ash of crude drugs

c) ash of inorganic matter

d) none of these.

ii) The two groups of alkaloids present in opium are

a) Pyridine and pyrimidine

b) Phenanthrene and Isoquinoline

c) Alkaloidal amine and purine

d) Indole and Imidazole.

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iii) In HPLC Instrument, separation column is present in between

a) Detector and data processing

b) Pump and sample injection

c) Eluent and pump

d) Sample injection and detector.

iv) For upper surface of Datura, stomatal index is

a) 12.7 to 19.5 b) 12.7 to 19.4

c) 12.7 to 19.6 d) 12.7 to 19.3.

v) Areca contains not less than

a) 0.26% Alkaloids b) 0.25% Alkaloids

c) 0.27 Alkaloids d) 0.28% Alkaloids.

vi) In GLC, the length of capillary column is

a) 25 - 50 meters b) 25 - 55 meters

c) 25 - 60 meters d) 25 - 70 meters.

vii) Coffee contains

a) 3% - 5% caffeine b) 2% - 3% caffeine

c) 4% - 5% caffeine d) 3% - 4% caffeine.

viii) The example of liquid alkaloid is

a) Quinine b) Caffeine

c) Morphine d) Nicotine.

ix) In Silica gel-G, "G" is

a) Calcium phosphate b) Calcium oxide

c) Calcium carbonate d) None of these.

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x) Which one of the following is a non-nutritive sweetener ?

a) Sorbitol b) Mannitol

c) Aspartame d) Sucrose.

xi) Iodine in potassium iodide solution is ..... reagent.

a) Dragendorff's b) Wagner's

c) Mayer's d) Hager's.

xii) The main chemical constituent in Physostigma is

a) Eseramine b) Eserine

c) Eseroline d) None of these.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. 3 × 5 = 15

2. Describe the macroscopic characters of different types of opium plant.
3. What is Rf value ? What is the importance of Rf value ? Name the solvent composition / solvent ratio used in TLC of general alkaloid detection. Name the spraying reagent used for protein ? 1 + 1 + 2 + 1
4. Define secondary metabolites. Write the biogenesis of any one secondary metabolite of pharmaceutical importance. 2 + 3
5. Define plant bitters and sweeteners. Write short note about two plant sweeteners. 1 + 4
6. Explain the microscopic characters of Datura leaf with a neat labelled diagram.

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GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. 3 × 15 = 45

7. Define chromatography. Write the principle and procedure of column chromatography. Explain how different chromatographic techniques are responsible in evaluation of herbal drugs. What is circular paper chromatography ? 2 + 6 + 6 + 1

8. Write the source, cultivation, collection, chemical constituent, adulterants and use of the following drugs : 3 × 5 = 15
   a) Belladonna
   b) Ephedra
   c) Cobelia.

9. a) What is Thin Layer Chromatography ?
   b) Describe application of TLC.
   c) What is the difference between HPTLC and TLC ?
   d) What is Linomat IV ? 4 + 4 + 6 + 1

10. What are the qualitative chemical tests of amino acids ? What is leucoanthocyanidins ? What are the structural differences between cardenolides and bufadienolides. Give the general isolation procedure of polyphenolic compounds. Give one example of a solvent system which can be used in the TLC of flavonoids. 2 + 2 + 4 + 6 + 1

11. Write source, constituents with structures and chemical tests of any *three* of the following drugs : 5 + 5 + 5
   a) Withania
   b) Coffee
   c) Hyoscyamus
   d) Solanum.

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