



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.



- 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.



**GROUP – C**

**( Long Answer Type Questions )**

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

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 :  
 $3 \times 5 = 15$
- 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.