|                           | Utech   |
|---------------------------|---|
| Name :                    |   |
| Roll No.:                 | To the same of the same training and training |
| Invigilator's Signature : |   |

## CS/B.PHARM(N)/SEM-7/PT-702/2012-13 2012 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:  $10\times 1=10$  i) Alkaloids present as the Salts of meconic acid are
  - a) Opium alkaloids b) Vinca alkaloids
  - c) Quinoline alkaloids d) Tropane alkaloids.
  - ii) Which of the following is the precursor molecule for the bio-synthesis of Quinoline alkaloids?
    - a) Tryptophan b) Lysine
    - c) Phenyl alanine d) Tyrosine.
  - iii) Shinoda test is done for the detection of
    - a) Alkaloid b) Terpenoids
    - c) Flavonoids d) Glycosides.

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|---------|---|---|----------|-------------------------|--|
| iv)     | Qui   | nidine is used as                         | Siles in |                         |  |
|         | a)  | Anti-arrhythmic                           | b)       | Anti-malarial           |  |
|         | c)  | Analgesic                                 | d)       | anti-cancer.            |  |
| v)      | Alka  | aloid Salts are soluble in                |          |                         |  |
|         | a)  | Organic solvents                          | b)       | Water                   |  |
|         | c)  | n-Hexane                                  | d)       | Pet-ether.              |  |
| vi)     | The<br>to   | Somaclonal variation of                   | of pla   | nt cells are caused due |  |
|         | a)  | Mutation                                  | b)       | Cyto-differentiation    |  |
|         | c)  | Habituation of Callus                     | d)       | Polyploidy.             |  |
| vii)    |   | ich Anthraquinone is<br>dlings of Senna ? | initi    | ally formed in young    |  |
|         | a)  | Rhein                                     | b)       | Aloe-emodin             |  |
|         | c)  | Chrysophanol                              | d)       | dianthrone.             |  |
| viii    | ) End   | locrocin is the precursor                 | of       |                         |  |
|         | a)  | Anthraquinone                             | b)       | Cardiac                 |  |
|         | c)  | Bitter                                    | d)       | Flavones glycoside.     |  |
| ix)     | Whi<br>earl                                       | s is useful for bringing                  |          |                         |  |
|         | a)  | Nitrogen                                  | b)       | Potassium               |  |
|         | c)  | Sulphur                                   | d)       | Phosphorus.             |  |
| x)      | What is the daily requirement of Vitamin A for Ad |   |          |                         |  |
|         | a)  | 6000-8000 I.U                             | b)       | 1500 I.U.               |  |

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c)

d)

3000 I.U..

5000 I.U.

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|----------|------------------------------------|--|----------------------------------|--------------|-----------------------------|--|
|          | xi)                                | Strychnine is type of Alkaloid.  |                                  |              |                             |  |
|          |                                    | a)   | Tropane                          | b)           | Quiroline                   |  |
|          |                                    | c)   | Indole                           | d)           | Pyridine.                   |  |
|          | xii)                               | Wh   | ich compound has                 | fluorescen   | nt nature in Alkali ?       |  |
|          |                                    | a)   | Anthrone                         | b)           | Anthranol                   |  |
|          |                                    | c)   | Oxanthrone                       | d)           | Anthraquinone.              |  |
|          | xiii)                              | xiii) The pH of plant tissue culture media is                                  |                                  |              |                             |  |
|          |                                    | a)   | 5—6                              | b)           | 8—9                         |  |
|          |                                    | c)   | 2—3                              | d)           | 7.0.                        |  |
|          |                                    |  | GRO                              | UP – B       |                             |  |
|          | (Short Answer Type Questions)      |  |                                  |              |                             |  |
|          |                                    |  | Answer any thre                  | ee of the fo | ollowing. $3 \times 5 = 15$ |  |
| 2.       | Writ                               | te th  | e chemistry, bio-s               | ynthesis a   | nd Pharmacological use      |  |
|          | of a                               | tropi  | ne.                              |              | 1 + 3 + 1                   |  |
| 3.       |                                    | Define tissue culture and write different types of plant tissue culture. $1+4$ |                                  |              |                             |  |
|          |                                    |  |                                  |              |                             |  |
| 4.       |                                    | •  | Alkaloids. Discure of alkaloids. | ıss briefly  | 7 about one isolation $2+3$ |  |
| 4.<br>5. | prod                               | cedui  |                                  | •            |                             |  |
|          | prod                               | cedui<br>te a r  | re of alkaloids.                 | ycosides.    | 2 + 3                       |  |

3

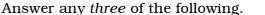
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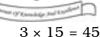
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## (Long Answer Type Questions)





7. a) Define Glycoside.

- b) Explain different methods of classification of Glycosides.
- c) Give the specific chemical tests to identify Anthraquinone Glycoside and Cardiac Glycoside.
- d) Write the bio-synthesis of Digitoxin.
- 2 + 4 + 6 + 3
- 8. a) Explain the general method of Plant tissue culture.
  - b) Write short notes on the following:
    - (i) Hairy root disease treatment by the help of plant tissue culture.
    - (ii) Immobilization of cell and its application.
- 9. a) What are terpenoids?
  - b) Classify them with examples.
  - c) Write the general pathway involved in the bio-synthesis of terpenoids. 2 + 4 + 9
- 10. Write down the chemistry and bio-synthesis of ephedrine and morphine.  $7\frac{1}{2} + 7\frac{1}{2}$
- 11. Write short notes on any *two* of the following :
- $2 \times 7\frac{1}{2}$
- a) Harbal cosmetics used for skin care
- b) Marine toxins
- c) Role of Artemisia in the treatment of malaria.

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