

14-06-2018

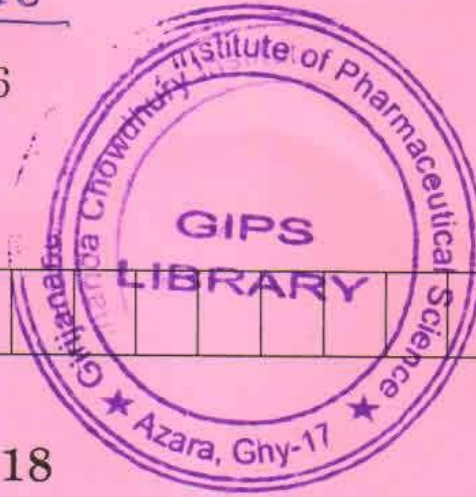
Total No. of printed pages = 6

**PY 1324010**

Roll No. of candidate

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2018



**B.Pharm. 4<sup>th</sup> Semester End-Term Examination**

**PHARMACOGNOSY – IV**

Full Marks – 100

Time – Three hours

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

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

1. Choose the correct answer from the following :  
(10 × 1 = 10)

(a) VAMP combination regime for the treatment of cancer stands for \_\_\_\_\_.

(i) Vincristine, Amoxicillin, Methotrexate and paracetamol

(ii) Vinblastine, Amethopterine, 6-mercaptopurine and paracetamol

(iii) Vindoline, Amoxicillin, Methotrexate and prednisone

(iv) Vincristine, Amethoptetine, 6-mercaptopurine and prednisone

[Turn over

(b) Which of the following has oxytocic property?

- (i) Ergometrine maleate
- (ii) Strychine hydrochloride
- (iii) Quinine sulphate
- (iv) Morphine hydrochloride

(c) Which one of the following is the Common vernacular name of *Asparagus racemosus*?

- (i) Tulsi
- (ii) Amla
- (iii) Ephedra
- (iv) Shatavari

(d) Caffeine is an alkaloid which gives specific positive test only with \_\_\_\_\_ reagent.

- (i) Van Urk's reagent
- (ii) Murexide reagent
- (iii) Legal's reagent
- (iv) Shinoda's reagent

(e) Which of the following plants has photosensitizing property?

- (i) *Asparagus racemosus*
- (ii) *Adhatada vasica*
- (iii) *Amni majus*
- (iv) *Atropa belladonna*

(f) Which of the following is true for Opium alkaloids in terms of their analgesic potencies?

- (i) Heroin > Morphine > Codeine
- (ii) Morphine > Codeine > Heroin
- (iii) Morphine < Heroin > Codeine
- (iv) Heroin < Codeine > Morphine

(g) Which of the following chemical mediators is responsible for TYPE-I allergic reaction?

- (i) Interleukin-1  $\alpha$
- (ii) Lymphokine
- (iii) Serotonin
- (iv) Histamine

(h) Which of the following company manufactures the improved and high quality TLC spreader?

- (i) DESAGA (West Germany)
- (ii) MERCK (Germany)
- (iii) PFIZER (USA)
- (iv) None of the above

(i) Which of the following is the botanical name of Neem?

- (i) *Andrographis paniculata*
- (ii) *Aegle marmelos*
- (iii) *Azadirachta indica*
- (iv) *Adhatoda vasica*

(j) Which of the following is use as potential sex stimulant?

(i) *Catharanthus*

(ii) *Shilajit*

(iii) *Ipecac*

(iv) *Colchicum*

2. (a) Give one ayurvedic medicinal utilization of Tulsi, Brahmi and Guggul. (1 × 3 = 3)

(b) Describe in detail the Biological source, chief chemical constituent(s) and marketed formulations of the following ayurvedic drugs.

(3 × 4 = 12)

(i) Amla

(ii) Adusa

(iii) Neem

(iv) Gokhru

3. (a) Match the following : (5 × 1 = 5)

Group A

Group B

(i) Tea

(1) *Ephedra gerardiana*

(ii) Deadly night share

(2) *Atropa belladonna*

(iii) Bakuchi

(3) *Bacopa monnieri*

(iv) Brahmi

(4) *Thea sinensis*

(v) Ma-huang

(5) *Psoralea corifolia*

(b) Define 'ergotism'. Describe in details the life cycle of ergot fungus with a neat diagram. Justify why ergot has to be stored carefully.

(1 + 6 + 3)

4. (a) Describe in detail the various methods used to extract and isolate alkaloids. (6)
- (b) Give a schematic diagram which is used to separate and isolate opium alkaloids. (3)
- (c) Write at least two important diagnostic characters each of Datura, Black pepper and Kurchi taking into account their morphological or microscopical properties. (3)
- (d) Give the botanical name and family of Shankhapushpi, gymnema and punarnava. (3)
5. (a) Define the terms stationary phase, mobile phase, solvent front, retention factor ( $R_f$ ) and edge effect. Classify the different types of chromatographic techniques. (5 + 5)
- (b) Describe in detail the various methods which are used to prepare thin layer plates in TLC. (5)
6. (a) Distinguish between photosensitizing agents and photodynamic agents. (4)
- (b) Define aeroallergens and hypoallergenic cosmetics. Classify natural allergens with suitable examples and describe contactant allergens in detail. (2 + 2 + 4)
- (c) Describe the role of fluranocoumarins in photosensitization of DNA at molecular level. (3)

7. Describe the detailed systematic pharmacognostical study of any TWO from the following : (7.5 × 2 = 15)
- (a) Ephedra
  - (b) Tea
  - (c) Withania
8. (a) Give the chemical structure of arecoline, nicotine and pilocarpine. (1 × 3 = 3)
- (b) Name any two protozoal parasites causing malaria. Write in detail the systematic pharmacognostical study of plant bearing alkaloids (any one) which is used to treat malaria. (1 + 8)
- (c) Name any three allied/adulterated/substituted drugs of Nux-vomica with at least one significant diagnostic character deflecting from the genuine source. (3)
9. (a) Give the principles for selecting the solvent system using Stahl's triangle. (3)
- (b) Differentiate between thin layer chromatography (TLC) and high performance thin layer chromatography (HPTLC). Give the applications of HPLC. (4 + 2)
- (c) Give the principles and instrumentation operational condition of HPTLC with a neat diagram. (6)

