

8/12/16

Total No. of printed pages = 6

PY 132307

Roll No. of candidate

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SCANNED

2016



B. Pharm 3rd Semester End-Term Examination

PHARMACOGNOSY – III

Full Marks – 100 Pass Marks – 35 Time – Three hours

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

1. (a) Answer the following questions (any ten) :
2×10=20
- (i) How do you differentiate between Secondary metabolites and Primary metabolites ?
 - (ii) What do you mean by lenticels and tubers ?
 - (iii) Write down the characteristics of saponin and anthraquinone glycosides.

[Turn over

- (iv) Write down the function of bitter glycosides.
- (v) How does pepsin form in the stomach?
- (vi) Explain the identification test of amylase enzyme.
- (vii) Write down the basic structure of steroid moiety.
- (viii) Explain aerobic and anaerobic respiration.
- (ix) Define the terms Pubescent, Isobilateral.
- (x) Write importance of the aglycone and glycone moiety in the glycosides.
- (xi) What do you mean by catalyst and coenzyme ?

(b) Fill in the blanks (any *ten*) : $1 \times 10 = 10$

- (i) Foxglove is the synonym of _____.
- (ii) Cardiac glycoside obtained from the plant source known as _____.

- (iii) Family of saffron _____.
- (iv) Pancreatin is active at pH _____.
- (v) Name one family of monocot group contain anthraquinone glycosides _____.
- (vi) Give some examples of tropane alkaloids _____.
- (vii) Name few cytotoxic compound obtained from marine sources _____.
- (viii) Pith cells consists of _____.
- (ix) The vascular bundles appear as _____ colour when mount in Phloroglucinol and HCl.
- (x) Arrow poison is the synonym of _____.
- (xi) Medullary rays found in _____ parts of plant.

2. Answer the following questions (any *eight*) :

$$5 \times 8 = 40$$

- (a) Write down the general properties of enzymes. Classify enzyme with examples. $3+2=5$
- (b) Represent a schematic diagram for the synthesis of secondary metabolites. 5
- (c) How does glycoside form in plant? What do you mean by glucosidal linkage? Give example. $2+3=5$
- (d) Discuss the structural activity relationship of cardiac glycoside with examples. 5
- (e) Write down the biological source and chemical constituents of following drugs : 5
Ginseng, Dioscorea, Chirata, Squill, Cascara.
- (f) What is the name of the aglycone moiety present in saponin glycoside and dioscorea? Write function of aglycone moiety in dioscorea. Name some plant families contain bitter glycosides. Mention the side effects of bitter glycosides. $2+1+1+1=5$

(g) Define with examples the Extra and Intracellular enzymes, Proteolytic enzymes, Pancreatic enzymes. Write down the mechanism of action of amylase and papain in the animal body. $2+3=5$

(h) Briefly discuss the cell content of a wood with label diagram. 5

(i) Briefly discuss the morphology and microscopic identification of gentian root with label diagram. 5

3. Answer the following questions (any *three*) :

$3 \times 10 = 30$

(a) Write short notes on : $5+5=10$

(i) Poisonous plant and its effect on human body.

(ii) Novel medicinal compound obtained from marine sources.

(b) Enumerate the biosynthesis pathway for the production of Tropane alkaloid and cardiac glycosides. $5+5=10$

(c) Write short notes on : $2+5+3=10$

(i) Borntrager's test

(ii) Bitter glycosides

(iii) Isolation of glycosides.

(d) Briefly discuss the collection procedure of Aloe juice. Write down the details pharmacognosy of digitalis leaf. $4+6=10$