MASTER OF PHARMACY EXAMINATION, 2018
(1st year, 1st Semester)
Pharmaceutical Chemistry – I

Time: Three hours. Full Marks: 100

Answer any ***five*** questions taking at least One from each Group

GROUP – A

1. Describe the therapeutic importance, structural feature of the principle component and source of the following as described in IP 2014

(a) Myrobalan

(b) Vasaka

(c) Kalmegh

(d) Gokhru

(e) Senna

(f) Shatavari

(g) Lavang

(h) Manjistha

(i) Valerian

(j) Gudmar 10 x 2 =20

2. a) Explain the following Metabolic pathways for the production of secondery metabolites with example:

(i) Phenyl alanine pathway

(ii) Acetate mevalonate pathway

(iii) Sikimic acid pathway

(iv) Ornithine pathway 4 x 2.5 =10

(b) Explain the characteristic features of the following and their influence for promotion and development of medicinal plants and metabolites:

(i) GAP
(ii) TKDL
(iii) GCP
(iv) BSI
(v) National Biodiversity Bill 5 x 2 =10

Ref. No.- Ex/PG/PHAR/T/112A/2018

M. Pharm 1st Year 1st Semester Examination-2018

Pharmaceutical Chemistry- I

Time: 3 Hrs. **F.M-100**

Answer any five questions taking atleast one from Each Group

GROUP - B

3. a) Define and classify synthetic systemic antibacterials.

b) What are the advantages of Fluoroquinolones over other synthetic antibacterials ?

c) Discuss the mode of action and S.A.R of fluoroquinolones.

d) Outline synthesis and therapeutic uses of the following.

Ciprofloxacin, Norfloxacin, Lomefloxacin, Pefloxacin

2+2+6+10 = 20

4. a) What do you mean by dereplication of natural products ? Draw a scheme for Bio-activity directed isolation of natural products.

b) How can you make rapid detection and subsequent isolation of bioactive compounds from crude products ?

c) What do you understand by Highthroughput screening. Mention some procedure.

d) What do you mean by Unbiased approach. How can unbiased approach help in structural elucidation of natural products ?

5+5+5+5 = 20

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M. PHARMACY FIRST YEAR FIRST SEMESTER - 2018

Subject : PHARMACEUTICAL CHEMISTRY I

Time : 3 Hours | Full Marks :100

Answer any FIVE questions taking at least ONE from each group. ALL parts of a question must be answered in the same place of the answer-script.

GROUP - C

5. Discuss the effects of solubility parameters of solutes and solvent, ionic strength of solution and dielectric constant of solvent on reaction rate. [10+5+5

6. (a) Discuss collision theory and transition state theory of reaction rates. [7+7

(b) In the study of the acid-catalyzed hydrolysis of procaine, the first-order reaction rate *k* was obtained from a plot of log c versus t, and the activation energy Ea from an Arrhenius plot of log k versus 1/T. The values were $k = 38.5 \times 10^{-6}$ sec^{-1} at 97.30 degree C and Ea = 16.8 kcal/mole. Compute entropy change, the frequency factor A, and the probability factor P. [6

7. Write notes on specific acid-base catalysis and general acid base catalysis. [12+8