



**NE-02010312** Seat No. \_\_\_\_\_

**M. Pharm (Pharmacology) (Sem. I) Examination**  
**January – 2017**  
**Advances In Pharmacology : (Speci.) Paper - II**  
**(Core Subject - III)**

Time : 3 Hours]

[Total Marks : 80

- Instructions :** (1) Answer any three from each section except question 1 and 5 are compulsory.  
(2) Figures to the right indicates marks.  
(3) Draw neat and clean diagram when required.

**SECTION – I**

- 1** Explain the followings in short : (Any Seven) **2×7=14**
- (A) PPAR
  - (B) Urotensin II
  - (C) Apelin
  - (D) Substance P
  - (E) Farnesoid Receptors
  - (F) Co-trimoxazole
  - (G) Give rationale for : Methyldopa in hypertension
  - (H) Give rationale for : Dantrolene sodium in spastic cerebral palsy
  - (I) Give rationale for : Tamsulosin in benign prostate hypertrophy
  - (J) Justify use of folic acid with Methotrexate treatment.
- 2** Answer the following :
- (A) Classify the receptors for the following giving emphasis **7** on signal transduction mechanisms and suitable examples of its agonist and antagonist.
    - (i) Endothelin Receptors
    - (ii) Purinoreceptors

- (B) Enlist Prostanoids. Describe the therapeutic applications of prostaglandins. **6**
- 3** Answer the following :
- (A) Classify Sympathomimetics. Discuss therapeutic uses and adverse effects of clonidine **7**
- (B) Explain physiological role and therapeutic potential of Phosphoinositide 3-Kinase (P13K) and Akt. **6**
- 4** Answer the following :
- (A) Classify Sympatholytics. Discuss therapeutic uses and adverse effects of  $\beta$ -blockers. **7**
- (B) Write Mechanism of action and therapeutic uses of:- **6**
- (i) Amikacin
- (ii) Cefpodoxime

## SECTION – II

- 5** Answer the following : (Any Two) **2×7=14**
- (A) Classify antimicrobial agents based on mechanism of action. Write antimicrobial spectrum and therapeutic indications of Doxycycline.
- (B) Discuss physiological and pathological role of histamine and 5-HT.
- (C) Classify immunosuppressants. Discuss the role of immunosuppressants in organ transplantations giving suitable examples.
- 6** Answer the following:
- (A) Write a note on mechanism of action, therapeutic uses and adverse effects of cholinesterase inhibitors. **7**
- (B) Differentiate non-depolarizing and depolarizing neuromuscular blockers. **6**

- 7 Answer the following :
- (A) Classify anticancer drugs. Describe the role of hormones in cancer chemotherapy. 7
  - (B) Explain in brief about mechanisms of resistance development to antibiotics. 6
- 8 Answer the following :
- (A) Describe mechanism of action, spectrum of activity, therapeutic uses and adverse effects of Penicillins. 7
  - (B) Write mechanism of action, therapeutic uses and adverse effects of Sulphonamides. 6
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