

**B. PHARM.  
FOURTH SEMESTER  
MEDICINAL CHEMISTRY-I  
BP402T**

**SET  
A**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 75

**( PART-A: Objective )**

Time: 30 min.

Marks: 20

*Choose the correct answer from the following:*

**1×20=20**

- Which one of the following is triazoloderivatives  
a. Barbitol  
b. Alprazolam  
c. Diazepam  
d. Glutethimide
- Which one of the following antipsychotics is a fluoro buterophenone derivatives  
a. Sulpiride  
b. Haloperidol  
c. Loxapine succinate  
d. Molindone hydrochloride
- Which one of the following is act as a dissociative anesthetics  
a. Halothane  
b. Methohexital sodium  
c. Ketamine hydrochloride  
d. Isoflurane
- Which one of the following is act as a Inhalation anesthetics  
a. Halothane  
b. Methohexital sodium  
c. Ketamine hydrochloride  
d. None of these
- Which one of the following is act as a anticonvulsant drug  
a. Phenytoin  
b. Sulpiride  
c. Molindone hydrochloride  
d. Alprazolam
- Which one of the following is act as a selective COX-II inhibitor  
a. Celecoxib  
b. Rofecoxib  
c. Valdecoxib  
d. All of these
- Which hetero atoms are present in phenothiazines structure  
a. O & N  
b. O & S  
c. N & P  
d. S & N
- Which one of the following phenothiazines consists of Ethyl piperidyl side chain  
a. Promazine  
b. Prochlorperazine  
c. Thioridazine  
d. Trifluperazine
- Which one of the following phenothiazines consists propyl piperazine ring.  
a. Thioridazine  
b. Promazine  
c. Prochlorperazine  
d. Chlorpromazine

10. Which one of the following is act as a housekeeping enzyme
  - a. COX-I
  - b. COX-II
  - c. Both a and b
  - d. NSAIDs
11. Which one of the following is act as a Sympathomimetic agents
  - a. Dopamine
  - b. Tolazoline
  - c. Propranolol
  - d. Carbachol
12. Which one of the following is act as a alpha blocker
  - a. Dopamine
  - b. Tolazoline
  - c. Propranolol
  - d. Carbachol
13. Which one of the following is act as a Beta blocker
  - a. Dicyclomine hydrochloride
  - b. Tolazoline
  - c. Propranolol
  - d. Salbutamol
14. Out of the following which one consists the highest electronegativity
  - a. F
  - b. O
  - c. N
  - d. C
15. Which one of the following is act as a Parasympathomimetic agents
  - a. Carbachol
  - b. Ipratropium bromide
  - c. Dicyclomine hydrochloride
  - d. All of the above
16. What is the full form of EDTA
  - a. Ethylene Diamine Tetra Acetic Acid
  - b. Ethylene Diamine Tri Acetic Acid
  - c. Ethane Diamine Tetra Acetic Acid
  - d. Ethylene Diamine Tetra Acetate
17. In case of barbiturates, If the sum of the carbon atoms of both the substituents at c-5 counts between 5-7 then what is the outcome
  - a. Rapid onset and shortest duration
  - b. Intermediate duration of action
  - c. Slowest onset and longest duration
  - d. Rapid onset and longest duration.
18. In case of benzodiazepine, to get the maximum potency which positions should be unsubstituted
  - a. 1,2,3
  - b. 3,5,7
  - c. 6,8,9
  - d. 7,6,8
19. Which one of the following pairs is act as a Isosteres.
  - a. CO<sub>2</sub> & N<sub>2</sub>O
  - b. H & P
  - c. H<sub>2</sub>O & P
  - d. C & N
20. Which one of the following is act as a Cholinergic blocking agents
  - a. Dicyclomine hydrochloride
  - b. Tolazoline
  - c. Neostigmine bromide
  - d. Carbachol

**( PART-B : Descriptive )**

Time : 2 hrs. 30 min.

Marks : 35

*[ Answer any seven (7) questions ]*

1. Write the SAR of Phenothiazine derivatives. 5
2. Write the synthesis of Ibuprofen? 5
3. Write the SAR of benzodiazepines. 5
4. Write the synthesis of Halothane and Methohexital sodium. 3+2=5
5. Write the SAR of barbiturates. 5
6. Write the synthesis of Phenylephrine and Salbutamol. 2+3=5
7. Write the SAR of morphine analogue. 5
8. Write the synthesis of Ketamine hydrochloride. 5
9. Write the synthesis of Propranolol and Tolazoline. 3+2=5

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**PART-C: Long type questions**

*[ Answer any two (2) questions ]*

1. Write the synthesis of (*any two*) 10
  - a. Carbamazepine
  - b. Phenytoin
  - c. Ethosuximide.
  
2. Write the synthesis of 10
  - a. Fentanyl citrate
  - b. Methadone hydrochloride.
  
3. Write the synthesis of (*any two*) 10
  - a. Diazepam
  - b. Chlorpromazine hydrochloride
  - c. Barbital.