Total No. of Questions : 6]

SEAT No. : [ ]

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[5125]-42
M.Sc.
DRUG CHEMISTRY
CH - 462 : Chemotherapy
(2008 Pattern) (Semester - IV)

Time : 3 Hours] ***[Max. Marks : 80***

Instructions to candidates:

1) ***All questions are compulsory.***
2) ***Answers to the two sections should be written in separate answer books.***
3) ***Figures to the right indicate full marks.***

SECTION - I

Q1) Answer any three of the following: **[15]**

a) Give a brief account of cell wall synthesis. Dicuss the drugs which affect this process. Why are these drugs safe?

b) Discuss in brief the development of quinolone antibiotics.

c) Discuss in brief various steps involved in protein synthesis. How aminoglycosides and tetracyclines exert their antibiotic action?

d) What is drug resistance? Explain with suitable examples the mechanism of drug resistance and strategies to combat drug resistance.

Q2) Answer any two of the following: **[16]**

a) Discuss in brief biochemical basis of cancer. What are the different classes of anticancer agents. Explain the importance of vinca alkaloids in cancer treatment.

b) Discuss in brief intra and interneuronal signal transmission. Explain in brief depression and various classes of antidepressant drugs.

c) Give a brief account of common viral infections. Discuss the agents interfering with viral nucleic acid replication in details.

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Q3) Discuss in brief any three of the following: **[9]**

a) Antifungal agents.

b) Analgesics.

c) Anticonvulsants.

d) Sedatives.

SECTION - II

Q4) Answer any three of the following: **[18]**

a) Explain in brief the organization of endocrine system. What is negative feedback mechanism? Explain the role of thyroid hormones.

b) Explain the mechanism of pain and inflammation. Discuss how indomethacin, celecoxib and piroxicam exhibit their effect.

c) Explain in brief any two of the following CVS disorders. Discuss the pathophysiological changes and at least one drug to treat them

i) Congestive Heart Failure.

ii) Angina pectoris.

iii) Arrhythmia.

d) Explain how the following group of compounds help in management of disease (any three)

i) Organic Nitrates

ii) Na^+ channel Blockers

iii) Vasodilators

iv) Phosphodiestrase III inhibitors

Q5) Answer any two of the following: **[10]**

a) Describe in brief following GIT disorders. What are the common strategies to treat them (any two)

i) Nausea and vomitting

ii) Dirrheoa

iii) Hyperacidity

b) Explain the life cycle of plasmodium and expalin the role of mefloquin and pyrimethamine as antimalarials with their mechanism of actions.

c) What is diabetis? How NIDDM is different from IDDM. Explain how oral hypoglycemic agents control the blood sugar level.

Q6) Give the mode of action and uses of the following drugs (any four): **[12]**

a) Pantoperazole.

b) Chloramphenicol.

c) Roxithromycin.

d) Ritonavir.

e) Dapsone.

f) Rifampin.

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