| Seat No.: | Enrolment No. |
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GUJARAT TECHNOLOGICAL UNIVERSITY

B. PHARM. - SEMESTER - VII • EXAMINATION - WINTER 2012

Subject code: 270003 Date: 01/01/2013

Subject Name: Pharmaceutical Chemistry-IX (Medicinal Chemistry)

Time: 10.30 am - 01.30 pm Total Marks: 80

Instructions:

- 1. Attempt any five questions.
- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full marks.

| Q.1 | (a) | Explain briefly following terms: 1. Chemotherapeutic agent 2. Antibiotics 3. Transduction | 6 |
|-----------------|-----|---|---|
| | | 4. Chemotherapeutic index 5. Synergistic effect 6. Crystalurea | |
| | (b) | Classify β-lactam antibiotics, and write short note on Repository Preparation of Penicilin-G. Explain disadvantages of Penicillin-G | 5 |
| | (c) | Write short note on Semisynthetic Penicillins. | 5 |
| Q.2 (a) (b) | 1.1 | Explain mechanism of action of co-trimoxazole. Pharmacologically classify Sulpha | 6 |
| | () | drugs and give SAR of Sulphonamides | |
| | (b) | Give synthesis of following drugs: | 5 |
| | () | 1. Sulphacetamide 2. Trimethoprim 3. Penicllin-G | |
| | | 4. Chloramphenicol 5. Ketoconazole | |
| | (c) | Write short note on SAR of Tetracyclines. Explain the term Fanconi like syndrome | 5 |
| Q.3 (a) | (a) | Enumerate different Protozoal infections mentioning their causative organism. Explain sexual phase of malaria parasite. How these phase could be controlled | 6 |
| | (b) | Classify antiviral agents and write short note on Anti-HIV agents | 5 |
| | (c) | Give synthesis of following drugs: | 5 |
| | | 1. INH 2. PAS 3. Chloroquine 4. Metronidazole 5. Methimazole | |
| Q.4 (a) (b) (c) | (a) | Explain bioactivation of Cyclophosmide and Write note on Natural Products used in | 6 |
| | . , | treatment of cancer | |
| | (b) | Classify anti neoplastic agents and write short note on alkylating agents | 5 |
| | (c) | Explain the following terms: | 5 |
| | | 1. Malilgnant tumour 2. Metastatsis 3. Leukemia | |
| | | 4. Apoptosis 5. Graybaby syndrome | |
| Q.5 | (a) | Explain the following terms: | 6 |
| | | 1. Type I diabetes 2. Type II diabetes 3. Gestational diabetes. | |
| | | Write short note on Oral Hypoglycemic agents | |
| | (b) | Enumerate male and female sex hormones. Give name of synthetic analogue of each | 5 |
| | | category, and write short note on oral contraceptives | |
| | (c) | Give structure, category and synthesis of following(any two) | 5 |
| | | 1.Pyrimethamine 2.Tamoxifen 3.Glipizide | |
| Q. 6 | (a) | Explain Nomenclature and stereochemistry of Steroids | 6 |
| | (b) | Classify steroids, and write short note on Glucocorticoids | 5 |
| | (c) | Give importance of Thyroid Hormones and write short note on anti thyroid drugs | 5 |
| Q.7 (a) (b) (c) | (a) | What are immunomodulators, give their applications. What are the drawbacks associated with their uses, how they could be minimized. | 6 |
| | | Comment: Stem cells are good alternative to immunomodulators | |
| | (b) | Enumerate antibiotics of Fungal, Actinomycetous and Bacterial origin. Chemically | 5 |
| | | classify antibiotics. | |
| | (c) | Differentiate the following: | 5 |
| | | (1) Quinolines and Quinolones. (2) Metabolites and Antimetabolites. | |
| | | Write short note on Antifungal agents effective which are effective both systemically as well as topically | |
