

M.Sc. 3rd Semester Examination, 2022

CHEMISTRY

PAPER – CEM-304(CBCS)

Full Marks : 40

Time : 2 hours

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

A. Answer any *four* questions : 2 × 4

- 1. Draw the structures of retinol and ascorbic acid.**
- 2. Suggest a method for the preparation of levodopa.**
- 3. Draw the structure of Quinghaosu and also mention its source.**

(Turn Over)

4. Define pharmacodynamics.
5. What do you mean by pharmacokinetics ?
6. What are receptors ? Give example.

B. Answer any *four* questions : 4 × 4

7. Draw the structure of L-ascorbic acid and state its physiological functions.
8. How will you synthesize amantadine ? What is amantadine used for ?
9. How are the clinically beneficial barbiturates classified ? Cite an example for each type.
10. Suggest a scheme for the synthesis of thiamine chloride hydrochloride.
11. Discuss about the ways of drug administration with suitable examples.
12. How prostaglandin synthase can be blocked ? Give the mechanism of this inhibition.

C. Answer any *two* questions : 8 × 2

13. (i) Suggest a scheme for the synthesis of triazolam and state its function. 4

(ii) Write down the synthesis of miconazole and state its uses. 4

14. (i) Discuss the physiological functions of Vitamin E. State the diseases caused by the deficiency of this vitamin and draw the structure of (\pm)- α -tocopherol. 4

(ii) Write down a scheme for the synthesis of pyridoxine. 4

15. (i) Explain how does captopril bind with Enzyme ACE and block it ? Explain with diagram. 4

(ii) Show how salbutamol act as agonistic drug and is used as bronchodilator. 4

16. (i) Draw the structure of ranitidine and explain how it acts as blocker for the treatment of acidity in stomach ? 4
- (ii) Describe the synthesis of paracetamol. 4
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