

C 21093

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Name.....

Reg. No.....

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH 2017

(CUCBCSS—UG)

Chemistry

CHE 6B 13 (E3)—MEDICINAL AND ENVIRONMENTAL CHEMISTRY

Time : Three Hours

Maximum : 80 Marks

Section A (One word)

Answer all questions.

Each question carries 1 mark.

1. State whether the bonded oxygen molecule in water (H_2O) is counted for calculating the dissolved oxygen levels or not.
2. Which element is the major constituent of soot present in diesel exhaust ?
3. In Winkler method for BOD calculation
1 mole of $O_2 \rightarrow$ ——— moles of $MnO(OH)_2 \rightarrow$ 2 mole of $I_2 \rightarrow$ 4 mole of $S_2O_3^{2-}$
4. ——— is the main protein in Blood plasma.
5. O, A, and ——— are the different blood types.
6. If recipient's blood group is ——— then the donor's group can be O+ or B+.
7. Kidney stone is chemically ———.
8. Isonicotinylhydrazide is used for the treatment of ———.
9. Dimercaprol is a medication for chelation therapy in ——— toxicity.

(10 × 1 = 10 marks)

10. What is asbestosis ?

Section B (Short Answers)

Answer any ten questions.

Each question carries 2 marks.

11. How BOD is different from COD ?
12. How does a two-way catalytic converter differ from a three-way catalytic converter ?
13. What are the common causes leading to the failure of sterilization of surgical instruments ?
14. How do you chemically test the presence of glucose in a urine sample ?
15. How is therapeutic index of a drug calculated ?

Turn over

16. What is terminal cancer ?
17. Explain the neurological effects of H_2S .
18. Explain desalination process.
19. What do you mean by Rh factor ?
20. Which particulate properties are sensitive to the performance of an electrostatic precipitator ?
21. What are the major lifestyle factors leading to hypertension ?
22. Explain the most effective short-course regimen for Tuberculosis.

(10 × 2 = 20 marks)

Section C (Paragraphs)

Answer any **five** questions.

Each question carries 6 marks.

23. Explain some of the new approaches in rain water harvesting.
24. Explain the various health standards fixed by WHO ?
25. What are the various methods of sewage treatment ? Explain.
26. Explain the principle and application of cyclonic separation.
27. What are the various components of wet scrubber systems ?
28. Explain the main causes and problems of metal ion toxicity.
29. What are prodrugs. Give three examples.
30. What are Nebulizers ? How do they function ?

(5 × 6 = 30 marks)

Section D (Essays)

Answer any **two** questions.

Each question carries 10 marks.

31. Discuss the causes and drugs used for the treatment of influenza, cholera and myocardial infarction.
32. Explain the analytical methods for the determination of CO, NO_x and hydrocarbons in air pollution monitoring ?
33. What are the major persistent organic pollutants ? Explain the toxicological effects of any four persistent organic pollutants.
34. Explain the different routes of drug administration.

(2 × 10 = 20 marks)