

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted from the academic year 2019-20 & thereafter)

SUBJECT CODE: 19CH/ME/PH45

B.Sc. DEGREE EXAMINATION, APRIL 2022
BRANCH IV - CHEMISTRY
FOURTH SEMESTER

COURSE : MAJOR-ELECTIVE
PAPER : PHARMACEUTICAL CHEMISTRY
TIME : 3 HOURS

MAX. MARKS : 100

SECTION – A
ANSWER ALL THE QUESTIONS

(30x1=30)

I. Choose the correct answer:

- EDTA is an example of a _____.
a) Antioxidant b) Preservative c) Flavouring agent d) Sequestrant
- Measles is an infection caused by _____.
a) Tuberculosis b) Measles c) Typhoid d) Dysentery
- Symptoms of tuberculosis includes _____.
a) Diarrhoea b) nausea c) phlegm d) rash
- Angina occurs when _____.
a) Blood flow to the heart is increased b) Blood flow to the heart is decreased
c) The heart beats rapidly d) The heartbeat slows down
- _____ is a vasodilator used to increase blood flow in arteries.
a) Morphine b) Ibuprofen c) EDTA d) Papaverine
- The volume percentage of red blood cells in the blood is called _____.
a) Hemoglobin b) Hematoplast c) Homeostasis d) Hematocrit
- Hormone therapy is used in the treatment of _____.
a) Blood cancer b) Breast cancer
c) Lung cancer d) Liver cancer
- A _____ causes extensive tissue damage.
a) Vesicant b) vasodilator c) verapamil d) all of the above
- _____ is used as a colouring agent in the pharmaceutical industry.
a) Amaranth b) caramel c) beta carotene d) all of the above
- _____ gives the regulations for the storage of various drugs.
a) Schedule A b) schedule P c) schedule Y d) schedule H

II. Fill in the blanks:

11. Cholera is caused by the bacterium _____.
12. The two major symptoms of typhoid are _____.
13. Shigellosis is another name for _____.
14. A drug that reduces both systolic and diastolic blood pressure is _____.
15. Methotrexate is an antimetabolite of _____.

III State whether true or false:

16. A drug target is associated with a particular disease process.
17. Cell restraining mechanism is not followed in non-malignant tumours.
18. Anti-inflammatory drugs are analgesic in nature.
19. A pharmacophore is responsible for the physiological activity of a drug molecule.
20. Pharmacopoeia is the study of crude drugs.

IV. Match the following:

- | | |
|---------------------------|------------------|
| 21. Aldomet | Bacteriostatic |
| 22. Mustine | Antioxidants |
| 23. Pethidine | Hypertension |
| 24. Tetracycline | Narcotic |
| 25. Esters of gallic acid | Alkylating agent |

V. Answer in a line or two:

26. Write the structure of vanillin.
27. Give any two types of solid dosage forms.
28. Write the structure of morphine.
29. What is an epileptic seizure?
30. Give any two characteristics of antibiotics.

SECTION – B**ANSWER ANY FIVE QUESTIONS:****(5x6=30)**

31. Discuss the synthesis, characteristics and uses of aspirin and paracetamol.
32. Explain the properties of preservatives used as pharmacological aids. Discuss the use of sodium benzoate as a preservative in the pharmaceutical industry.
33. Explain the causes, symptoms and treatment methods for Jaundice.
34. Discuss any four routes of drug administration.
35. Explain the different types of anaemia. How can it be controlled?

36. What is an anaesthetic? Discuss the four stages of anaesthesia.
37. Describe the causes, prevention and treatment methods for the human immunodeficiency virus.

SECTION – C**ANSWER ANY TWO QUESTIONS:****(2x20=40)**

38. a) Describe the mosquito transmission cycle in malaria. Discuss the symptoms, treatment methods and preventive measures for malaria. (8 marks)
- b) Discuss the various interactions that take place between the drug and a receptor at the site of action. (8 marks)
- c) What is blood pressure? How is it monitored? Distinguish between hyper and hypotension. (4 marks)
39. a) How are sweetening agents used in the pharmaceutical industry? Discuss the characteristics of saccharin and sorbitol as sweetening agents. (7 marks)
- b) Give the therapeutic uses of Penicillin and Streptomycin. (6 marks)
- c) Explain how cardiac glycosides such as digoxin are used to treat cardiovascular diseases. (7 marks)
40. a) How do the peptide hormones, insulin and glucagon, regulate blood glucose levels? (6 marks)
- b) What are the different types of diabetes? Discuss the characteristics of the drugs used to treat Type I and II diabetes. (8 marks)
- c) Define the following. (6 marks)
- i) Therapeutic Index
 - ii) Over the counter drugs
 - iii) Antimetabolites
