Anjuman Islam Janjira Degree College of Science Murud-Janjira, Raigad-402401 Affiliated to University of Mumbai	
Class: -T.Y.B.Sc. (Chemistry)	**Subject: - Drugs and Dyes**
Semester: - V	**Course code: - USACDD501**
Exam Event: - Winter 2023 (SH)	**Marks: 100**
Date: - 03/11/2023	**Duration: - 3 Hours**

N.B:

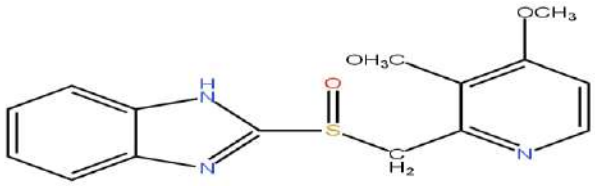
1. **All** questions are compulsory.
2. **Figures** to the right indicate full marks.
3. Answer for the same question as far as possible should be written together.

Q. 1: Answer any four of the following **20**

A. i. Define drug and give its various sources from which it is derived.
ii. What is Pro-drug and Half-life efficiency?
B. i. What are the requirements of Ideal Drug?
ii. Define LD50 and ED50
C. i. Define terms
a) Pharmacon b) Pharmacology c) Pharmacophore
ii. Describe how Misbranded Drugs are injurious?
D. i. Describe Parental Route of Administrative with its advantages and disadvantages.
ii. Explain CNS Depressant with its example.
E. i. Explain about various forms of dosage.
ii. Define Pharmacopoeia with example.
F. i. Give the synthesis of Amphetamine.
ii. Describe about Phenytoin with its uses and side effects.

Q. 2: Answer any four of the following **20**

A. i. Explain about non-narcotics drug and their classification with example.
ii. What are Analgesics and give its classes?
B. i. Give the synthesis of Acelofenac.
ii. Explain the term narcosis.
C. i. Give the idea of Parkinson's disease with its symptoms.
ii. Describe about para-amino phenol with its uses.
D. i. What are mucolytes and anti-tussive.
ii. State structure of morphine and its application.
E. i. Give synthesis of levodopa.
ii. What is aspirin and give its uses.
F. i. Give the synthesis of Atenolol
ii. Write name of the structure and give it uses and side-effects



Q.3: Answer any four of the following **20**

A. i. Define dyes & give the requirement of good dyes.
ii. How is the nomenclature of dyes is derived?
B. i. What are various fastness properties of dyes?
ii. Explain about acidic dyes.
C. i. Give the account of curcumin & henna as natural dyes.
ii. With various examples describe the temperature, agency & class of dye.
D. i. With respect to force binding dyes to the fibres explain about covalent bond.
ii. What are blended fabrics?
E. i. Give an account of natural fibres.
ii. Describe the development of synthetic dyes.
F. i. What are the basic operations involve in dying process?
ii. What are stilbene derivatives as optical brighteners?

Q. 4: Answer any four of the following **20**

A. i. Describe about absorption of visible light.
ii. What are chromophores and auxochrome and give their example?
B. i. What are various complementary colours with their wavelengths?
ii. Why Ortho-Para Nitrophenols show dark colours in alkaline medium?
C. i. Describe about Witt's chromophore theory
ii. Draw the resonance structures of Anthraquinone
D. i. How is nitration process take place?
ii. Explain the terms: 1. Bathochromic shift 2. Hyperchromic shift
E. i. Describe about molecular orbital approach
ii. What are primaries?
F. i. Explain in detail about unit process
ii. Give the preparation of nitro chlorobenzene.

Q. 5: A. Choose the correct option from the following and rewrite the sentences (Any 12). **12**

1. Therapeutic index =……
A. LD50/ED50 B. ED50/LD50 C. GI50/LD50
2. A biological active drugs which on latentiation is converted in to biological inactive is called ……
A. Prodrug B. Pharmacophore C. Pharmacon
3. Maximum biological action which can be caused by minimum amount of drug administration is called ……
A. High potent drug B. Low potent drug C. Moderate drug
4. If a drug is imported under the name which belong to another drug are called……
A. Spurious Drug B. Misbranded drug C. Adulterated drug
5. The physiological activity of drug has been found to depends on the presence of some functional group or structural units are called ……
A. Pharmacon B. Pharmacology C. Pharmacophore
6. The treatment of infectious disease by using a chemical agent are called ….
A. Chemotherapeutic agents B. Vitamin C. Pharmacodynamics agents
7. Tranquilizer dugs are belonged to …….class of drug

A. CNS Modifiers B. CNS stimulant C. Selective CNS depressant

8. ……..are solid dosage forms swallowed through oral route

A. Pills B. Tablets C. Both a&b

9. Drug tramadol is belonging to ……

A. Cyclohexanol B. Fenamates C. Para amino Phenol

10. Dye molecule must have ……. so as to have a colour

A. Auxochrome B. Conjugation C. Both a&b

11. …… is solubilising group

A. – OH B.- NO_2 C. >C = O

12. The property of dye has stability towards higher temperature is called …… fastness.

A. Rubbing B. Heat C. Washing

13. British chemist …….. led to the foundation of the modern synthetic dyestuff industry.

A. William Henry Perkin B. Bottiger C. Martius

14. In 1858 ……. discovered the reaction of diazotization

A. Bottiger B. Johnn Peter Griess C. William Henry Perkin

15. The semi-synthetic and synthetic fibres are dyed by using …….. dyes

A. Vat dyes B. Mordant dyes C. Disperse dyes

16. Acid dyes have excellent fastness towards…….

A. Light B. Heat C. Washing

17. The increase in the wavelength of absorption of light is called …….. shift

A. Bathochromic B. Hypsochromic C. Hyperchromic

18. Phenolphthalein is ……. in alkaline medium

A. Colourless B. Pink C. Red

B. State whether the following sentences are True or False. (Any 4) 04

1. Drug that binds to a receptor and a block a biological response is called Agonist.
2. If a drug is imported under the name which belongs to another drug are called Adulterated Drug.
3. The heart and the blood vessel constitute the cardiovascular system.
4. Direct dyes have excellent fastness towards washing.
5. The indigo dye is green in colour..

C. Match the following. (Any 4) 04

Column A	Column B
1. Drug analeptic	a) Resorcinol
2. Enhance the flow of powder	b) Mauveine
3. Antipyretic	c) Lowering of body temperature
4. Synthetic dyes	d) Lubricant
5. Primaries	e) CNS stimulants