

# (REVISED COURSE)

QP Code: 51717

Time: (2 ½ Hours)

Total Marks: 75

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**NOTE:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1** a) How are the drugs classified on the basis of their therapeutic action? Give one example of each class. **5**

**OR**

a) What are the different routes of drug administration? Give the schematic representation of transfer of drugs to the various sites. **5**

**Answer any two of the followings.**

b) i) Explain the terms Analgesics and Antipyretics. **3**

ii) Give the synthesis of Paracetamol. **2**

c) What is mean by drug dose? Explain any five doses forms with suitable example. **5**

d) i) What are the requirement of an ideal drugs? **3**

ii) Define LD<sub>50</sub> and ED<sub>50</sub>. **2**

e) i) Explain the concept of Sedation, Hypnosis and Anesthesia. **3**

ii) Give the synthesis of Trimethadione. **2**

**Q.2** a) Give the synthesis, use and side effects of Levodopa. **5**

**OR**

a) Give the synthesis and use of Aceclofenac. **5**

**Answer any two of the followings.**

b) What are cardiovascular drugs? Give the synthesis, use and side effects of Atenolol. **5**

c) What are different types of Diabetes? Describe insulin therapy. **5**

d) Give the synthesis, use and side effect of Cetirizine. **5**

e) Give an account of drugs used for respiratory system. **5**

**Q.3** a) Explain natural dyes with suitable examples and give limitations of natural dyes. **5**

**OR**

a) State the important landmarks in the historical development of synthetic dyes. **5**

**Answer any Two of the following.**

b) Give one example with structure of the following classes of dyes. **5**

i) Nitro dyes

ii) Nitroso dyes

c) i) What is Colour Index? What do the suffixes L and R indicate? **3**

ii) Write the structure of the following dyes. **2**

i) Capri Blue

ii) Naphthazarin

c) i) Write short note on Disperse Dyes. **3**

ii) Classify the following dyes on the basis of chemical constitution. **2**

1) Rhodamine 6G

2) Indigo Carmine

d) i) Discuss Azoic Dyes giving suitable example. **3**

ii) Classify the following dyes on the basis of application. **2**

1) Orange II

2) Methyl Violet

e) i) Write the characteristic properties of a good dye. **3**

ii) Discuss Heterocyclic dyes. **2**

**Q.4** a) What are foodstuff dyes? Give characteristics properties and write any suitable example with structure. **5**

**OR**

a) Define the term Optical Brighteners. Discuss the characteristics of optical brighteners giving one example with structure. **5**

**Answer any Two of the following.**

- b) i) Discuss Valence Bond Theory of colour and chemical constitution of a dye. **3**  
ii) Give limitations of Quinonoid theory. **2**  
c) Discuss the following giving one example with structure. **5**  
i) Paper dyes  
ii) Solvent dyes  
d) i) Distinguish between Dyes and Pigments. **3**  
ii) Write the characteristics properties of dyes used for medicinal. **2**  
e) i) Describe Molecular Orbital Theory to explain colour of a compound. **3**  
ii) Give classification of organic pigments. **2**

**Q.5 A) Choose the correct option from the alternatives given below. 4**

I) A drug containing filthy or decomposed substance is known as---drug.

- a) misbranded                      b) adulterated                      c) spurious                      d) generic

II) Narcotic analgesics acts on-----

- a) PNS                      b) CNS                      c) Hormones                      d) None of these

III) ----- is added to arrest chemical degradation of a drug.

- a) Filler                      b) Lubricants                      c) Disintegrants                      d) Preservatives

IV) Which of the following is **not** a pharmacodynamics agent.

- a) CNS stimulants                      b) Diuretics                      c) Local anesthetics                      d) Antiseptic

**OR**

**P) Define the following terms. 4**

I) Pro-drug

II) Bioavailability

III) Pharmacophore

IV) Therapeutic Index

**B) State True or False for the following statements.**

**4**

I) Parenteral route is used for tablets and capsules.

II) In sustained release formulations, coating of a pill dissolves in acidic juice of stomach

III) ED<sub>50</sub> is the mean lethal dose.

IV) Glibenclamide is used as an oral hypoglycemic agent.

**OR**

**Q) Match the following pair.**

**4**

[A]

I) Metformin

II) Paracetamol

III) Frusemide

IV) Codeine

[B]

a) Antipyretic

b) Respiratory

c) Antidiabetic

d) Cardiovascular

**C) Match the following pair.**

**3**

[A]

I) G

II) S

III) D

[B]

a) Green colour

b) Yellow colour

c) Acid dye

d) Direct dye

**OR**

**R) State True or False for the following statements. 3**

- I) Paper dyes have weak fastness for light
- II) Tyrian Purple is a natural dye.
- III) Laser dyes are very pure compounds.

**D) Choose the correct option from the alternatives given below. 4**

- I) Cochineal dye is naturally obtained from-----
  - a) Algae                      b) Plants      c) Insects      d) Snails
- II) Pigments have ----- particle size as compare to dyes
  - a) large      b) small      c) same      d) None of these
- III) Optical brighteners absorbs radiation in ----- region
  - a) visible      b) UV      c) Infrared      d) X-ray
- IV) ----- molecules have very less dipole moment.
  - a) Unsymmetrical      b) Symmetrical      c) Coloured      d) Pigment

**OR**

**S) Write the structures of the following dyes. 4**

- I) Indigo
- II) Erichrome Black T
- III) Methylene Blue
- IV) Orange I

