

SEAT No. \_\_\_\_\_

[47]

No. of Printed Pages : 02

# Sardar Patel University

B. Sc. (Semester VI) Examination

Date: 15-07-2021, Thursday

Time: 10:00 TO 12:00

Industrial Chemistry

COURSE NO: (US06CICH21 – Synthetic Dyes and Pharmaceuticals)

Notes: Figures to the right indicate full marks.

Total marks: 70

Q.1 Answer the following Multiple Choice Questions. (All are compulsory) (10)

- The difference between a "Dye" and a "Pigment" is that a dye:
  - Is hold to the surface of the fiber by a Resin.
  - Usually diffuses into the interior of a fiber from Water solution.
  - Lays on the surface of the fiber.
  - None of them.
- What is a mordant?
  - A dye color that bites into the fiber.
  - A chemical that stops the dye process.
  - A metallic ion or salt added to the dye bath to make dyes more color fast by forming a bridge between the dye and the fiber.
  - None of them.
- Indigotin dye have:
  - Ortho quinonoid charged structure.
  - Para quinonoid charged structure.
  - Meta quinonoid structure.
  - No quinonoid properties.
- Levelness means:
  - Transfer of dye from dye bath to the fiber.
  - The dyes have the same depth at all parts of the fiber.
  - Addition of alkali to the dye bath.
  - None of them.
- Exhaustion means:
  - The dyes have the same depth at all parts of the fiber.
  - Transfer of dye from dye bath to the fiber.
  - Addition of acid to the dye bath.
  - None of them.
- Dye bath defined as:
  - It is the bath which contains the dye and other chemicals used in dyeing process.
  - It is a bath for crystallization of the dye.
  - It is a bath for washing the fiber.
  - None of them.
- In body where drug binding occurs?
  - Blood
  - CNS
  - Liver
  - Brain
- Which species can be classified?
  - Virus
  - Coccus
  - Bacteria
  - Bacillus
- Which of following is not a fat-soluble vitamin?
  - Vitamin D
  - Vitamin C
  - Vitamin E
  - Vitamin A

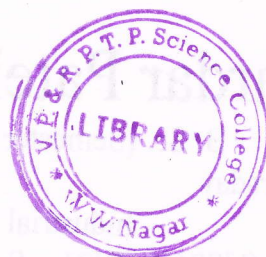


(1)

(P.T.O.)

10. Deficiency of Vitamin D causes.....

- A) Night blindness
- B) Rickets
- C) Beri-beri
- D) Hardening of cornea



Q.2 Answer the following:

(08)

1.  $-\text{NO}_2$ ,  $-\text{NO}$ ,  $-\text{N}=\text{N}-$  functional groups are Chromophores. True / False?
2. Dyes classified according to their "Chemical constitution" and "Application to the fiber". True / False?
3. Estimation of Naphthol is performed in a Acidic pH. True / False?
4. Estimation of Azo dye involved Reduction reaction. True / False?
5. First Sulpha drug was derived from an azo dye. True / False?
6. Pharmacodynamic agents affect the impaired functioning of human body. True / False?
7. Vitamin C also has antioxidant activity. True / False?
8. Growth hormone is responsible for glucose regulation in our body. True / False?

Q.3 Answer the following short questions (Any Ten).

(20)

1. Define term "Dependent Chromophores".
2. Define term "Chromogen".
3. Explain a term "Hypsochromic Auxochromes".
4. Define term "Nitrite value".
5. What mean by "Coupling value".
6. Write a reaction for estimation of  $\text{NO}_2$  group.
7. Explain term "Mutation".
8. Define term "Drug addiction".
9. Define term "Drug toxicity".
10. Write a structure and deficiency illness of "Vitamin H (Biotin)".
11. Write a structure and deficiency illness of "Vitamin E".
12. Enlist the various functions of Hormones.

Q.4 Attempt any four questions.

(32)

1. Write Witt's theory and explain how this theory relates colors and chemical constitution.
2. Give the classification of dyes according to their mode of application.
3. Discuss the procedure determinations of alpha and beta-naphthol.
4. Discuss the "fastness tests with respect to processing conditions".
5. Write the classification uses of various sulfa drugs.
6. Write a classification of drug on the basis of their therapeutic actions.
7. Give classification of vitamins and discuss occurrence, properties and deficiency diseases of vitamin A & K.
8. Write a note on "Antifungal agents".

— X —

(2)