

(82 & A-28)

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**SARDAR PATEL UNIVERSITY**  
**M. Sc. Semester -III (Organic Chemistry) Examination.**  
**Tuesday, 12<sup>th</sup> April - 2016**  
**PS03ECHE01: Synthetic Dyes and Pigments**

**Time: - 02:30 p.m. to 05:30 p.m.**

**Marks: 70**

**Q. 1. Choose the correct answers from the options given below.**

**[8]**

1. Polynoric rayon is \_\_\_\_\_.  
(a) Synthetic            (b) Semi synthetic    (c) Natural            (d) All of above
2. If the absorbed color is Blue than appear color is \_\_\_\_\_.  
(a) Orange            (b) Violet            (c) Yellow            (d) Green
3. In Aniline yellow, -NH<sub>2</sub> group is \_\_\_\_\_.  
(a) An Auxochrome    (b) Chromophore    (c) Chromogen        (d) A dye
4. \_\_\_\_\_ is responsible for flavor and color of tea.  
(a) Theaflavin gallate                            (b) Thioflavin gallate  
(c) Benzyl gallate                                (d) Ethyl gallate
5. \_\_\_\_\_ from the following is an inorganic pigment.  
(a) Charcoal            (b) Fast red            (c) Zero            (d) Malachite green
6. Dyes are used as medicine, because of \_\_\_\_\_.  
(a) Fluorescein        (b) Nontoxic nature    (c) Special color        (d) All of above
7. \_\_\_\_\_ is used as antiseptics in medicine.  
(a) Erythrosin        (b) Mercurochrome    (c) Amaranth            (d) Meldolas blue
8. A dye is a substance which contains \_\_\_\_\_.  
(a) Chromophore        (b) Auxochrome        (c) Both of these        (d) None of these

**Q. 2. Answer the following. [Any seven]**

**[14]**

- (1) Explain the effect of conjugation on colour of the dye.
- (2) Give synthetic rout of Tetrazine and Direct black 38.
- (3) Give the difference between dyes and pigment.
- (4) Explain vat dyeing process for cotton.
- (5) Synthesis (i) Indigo    (ii) Crystal violet.
- (6) Explain Red and Violet shift.
- (7) Give the use of synthetic organic pigment.
- (8) Explain Leather dye.
- (9) Explain photochromism.

①

**(P.T.O)**

- Q. 3. [A] Classify the dyes according to their Application. [6]  
[B] Discuss the Auxochrome and chromophore theory. [6]

OR

[B] Explain VBT and MOT with respect to dye. [6]

- Q. 4. [A] Explain the pretreatment of textile fibers and dyeing mechanism. [6]  
[B] Explain the following finishing agents of fiber. [6]

(i) Water repellent treatment (ii) Improvement of handle

OR

[B] Write a note on Non textile dyes. [6]

- Q. 5. [A] Write note on Dye sensitized solar (DSC). [6]  
[B] Explain Medicinal and Security application of colorants. [6]

OR

[B] Write the structure of dyes for LCD and Laser. [6]

- Q. 6. [A] Write short note on FBA. [6]  
[B] Enlist the type of pigments and explain heterocyclic pigments. [6]

OR

[B] Give the difference between a dyes and pigment? Write the application of pigments. [6]

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