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SEAT No. _____

No of printed pages: 02

SARDAR PATEL UNIVERSITY

M. Sc. Semester -III (Organic Chemistry) Examination.

Tuesday, 30th October - 2018

PS03ECHE01: Synthetic Dyes and Pigments

Time: - 02:00 p.m. to 05:00 p.m.

Marks: 70

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

[8]

1. Plot of absorption as a function of _____ is called absorption spectra.
(a) Frequency (b) Wave length (c) Emission (d) Photon
2. The complementary color of blue is _____.
(a) Orange (b) Violet (c) Yellow (d) Green
3. In Aniline yellow, -NH₂ 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. Without _____.
(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 the difference between dyes and pigment.
- (3) Explain vat dyeing process for cotton.
- (4) Synthesis (i) Indigo (ii) Crystal violet.
- (5) Explain Red and Violet shift.
- (6) Give the use of synthetic organic pigment.
- (7) Explain Leather dye.
- (8) Explain photochromism.
- (9) Explain cyanine type chromophore.

(P.T.O.)

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

OR

- [B] What is dye? Give requisites true dye. [6]

- Q. 4. [A] Explain the pretreatment of textile fibers and dyeing mechanism. [6]
[B] Write a note on Non textile dyes. [6]

OR

- [B] Explain the following finishing agents of fiber.
(i) Water repellent treatment (ii) Improvement of handle [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 Inorganic pigments. [6]

OR

- [B] What is pigment? Write the characteristic and application of pigments. [6]

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