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**SARDAR PATEL UNIVERSITY**  
**M.Sc. CHEMISTRY**  
**Semester – III, External Examination**  
**November 09, 2017 (Thursday)**  
**Time: 2:00 pm - 05:00 pm**  
**Synthetic Dyes and Pigments [PS03ECHE01]**

**N.B. Figures to the right indicate full marks**

**[Total Marks – 70]**

**Q.1 Answer the following multiple choice questions.**

**[08]**

- 1 Dying of polyester is carried out by \_\_\_\_\_ in most of the cases.  
(a) Disperse dyes (c) Biological dyes  
(b) Vat dyes (d) Ingrain dyes
- 2 From the following \_\_\_\_\_ is natural dye.  
(a) Turmaric (b) azo (c) Nitroso (d) Anthraquinone
- 3 Nitrobenzene is \_\_\_\_\_.  
(a) An Auxochrome (b) A Chromophore (c) A Chromogen (d) A dye
- 4 \_\_\_\_\_ is used as a food colour from the following.  
(a) Indigo (b) Saframine T (c) Amaranth (d) NIR
- 5 DSC based on a \_\_\_\_\_ is formed between a photo-sensitized anode and an electrolyte, a photo electrochemical system.  
(a) Semiconductor (b) Electrodes (c) Insulators (d) Current
- 6 Security marks and features that are not visible under normal light are made with \_\_\_\_\_.  
(a) Fluorescein (b) Luminescent pigments (c) Special dyes (d) All of above
- 7 complimentary color of blue color is \_\_\_\_\_.  
(a) Red (b) yellow (c) orange (d) gray
- 8 ..... is not application of NIR dyes.  
(a) Biochemical assay (b) Photoreprographic  
(c) Color photocopy (d) Laser photocopy

**Q.2 Answer the following questions. (ANY SEVEN)**

**[14]**

- 1 Write a note on Auxochrome-Chromophore theory in brief.
- 2 Describe food colors.
- 3 Write a note on dye bleach process.
- 4 Write synthesis of indigo dye.
- 5 Write a note on Medicinal dyes.
- 6 Write a note on reactive dyes.
- 7 Explain Michler's hydrol is colorless but it's cation is blue.

(P.T.O.)

