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23242

3 Hours / 70 Marks

Seat No. 

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- Instructions* –
- (1) All Questions are *Compulsory*.
  - (2) Answer each next main Question on a new page.
  - (3) Illustrate your answers with neat sketches wherever necessary.
  - (4) Figures to the right indicate full marks.
  - (5) Assume suitable data, if necessary.
  - (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

1. **Attempt any FIVE of the following:** **10**
  - a) Define the term colour.
  - b) Name any four in-organic yellow pigment.
  - c) List principle 'ores' of red oxide pigment.
  - d) Classify 'Blue' pigments
  - e) Name any two organic and in-organic green pigment.
  - f) List any four novelty pigments.
  - g) Write molecular formulae for PMA and PTMA tones.
  
2. **Attempt any THREE of the following:** **12**
  - a) Explain concept of undertone and masstone.
  - b) Compare Hansa yellow and Benzidine yellow.
  - c) Write properties and application of mixed metal oxide.
  - d) Write properties and application of phthalocyanine green pigment.

P.T.O.

- 3. Attempt any THREE of the following:** **12**
- a) Explain concept of high performance yellow pigment with examples.
  - b) Compare natural and synthetic red oxide pigment.
  - c) Write properties and application of chrome oxide green pigment.
  - d) Compare leafing and Non-leafing aluminium pigment.
- 4. Attempt any THREE of the following:** **12**
- a) Explain munsell colour system with diagram.
  - b) Explain zinc chrome used in corrosion resistance points.
  - c) Draw the structure of Toluidine Red and Signal Red.
  - d) Draw the structure of phthalocyanine blue with replaceable hydrogen atom.
  - e) Write process to determine under tone and mass tone of pigment.
- 5. Attempt any TWO of the following:** **12**
- a) Explain the concept 'ΔE' in details for shade matching with formulae.
  - b) Write properties and application of 'Hansa Yellow' with its structure.
  - c) Describe the process for Red oxide manufacturing with its application.
- 6. Attempt any TWO of the following:** **12**
- a) Explain the term floatation, flocculation and flooding with its remedies.
  - b) Write process to compare hiding power of dyes and pigments.
  - c) Draw the general flow diagram for manufacturing of aluminium pigments.
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