17343

14115

3 Hours/100 Marks

Seat No. | | | | | | | | |

***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.*

MARKS

1. Answer **any five** : **(5×4=20)**

   a) Differentiate between dye and colour.

   b) Define : i) hue, ii) chroma.

   c) What is chromophore ? Name the types of chromophores.

   d) Explain factors governing absorption of light.

   e) Distinguish between dyes and fragments.

   f) Name any four dyes based on their chemical structure.

   g) Give the method of preparation of H-acid.

2. Answer **any two** : **(2×8=16)**

   a) Indicate with reactions, preparations of (i) an azodyes and (ii) a nitrodyes.

   b) i) Explain the need for preparation of synthetic dyes.

      ii) What is the importance of intermediates in dyestuff industry ?

   c) Explain additive and substractive colour mixing.

3. Answer **any two** : **(2×8=16)**

   a) What is colour index ? Explain its significance.

   b) Give preparation methods (indicating reactions involved) of following intermediates.
      i) Gamma-acid, ii) Metanilic acid.

   c) i) What are reactive dyes ? **2**

      ii) Give preparation of cold brand reactive dyes. **6**

P.T.O.

MARKS

4. Answer **any two** : **(2×8=16)**

   a) i) What are HE and ME brand reactive dyes ? **2**

   ii) Explain with the help of reactions, preparation of ME brand reactive dyes. **6**

   b) Explain the relation between chemical structure and fastness properties of dye.

   c) i) Define a pigment. Is carban black, considered as organic pigment or inorganic ? **2**

   ii) Explain giving examples, classification of inorganic pigments. **6**

5. Answer **any two** : **(2×8=16)**

   a) Describe with the help of reactions preparation method of anthraquinone dyes.

   b) Write preparation method (indicating reactions involved) for
   i) J-acid, ii) Peri acid.

   c) i) Define a dye. **2**

   ii) Classify dyes based on method of application. **6**

6. Answer **any two** : **(2×8=16)**

   a) Explain destructive distillation of coal tar and uses of by-products obtained during this process in dyestuff manufacturing.

   b) Describe modern theory of colour chemical constitution.

   c) i) Explain the mechanism of dyeing.

   ii) Explain the nomenclature of dyes.
