



NBV-003-011403

Seat No. \_\_\_\_\_

M. Sc. (Sem. IV) (CBCS) Examination

April/May – 2017

Industrial Chemistry : IC-403

(Chemical Technology - II)

Faculty Code : 003

Subject Code : 011403

Time :  $2\frac{1}{2}$  Hours]

[Total Marks : 70

**Instructions:**

- 1) All Questions are compulsory.
- 2) Each question carries 14 marks.
- 3) Assume suitable data wherever necessary.

**1 Answer any seven out of the following:**

**14**

- 1) What are ceramics?
- 2) Differentiate Porous and Non porous ceramic ware.
- 3) Describe acidic and basic refractories.
- 4) Explain cleaning action of soap in brief.
- 5) What is the function of Soda ash and sodium tripolyphosphate in detergent manufacturing?
- 6) Enlist any four uses of Glycerin.
- 7) Define: (a) Blistering of Paints (b) Blooming of Paints
- 8) Write characteristics and uses of  $TiO_2$  white pigment.
- 9) Discuss requirements of good paints.
- 10) Write chemical reaction for synthetic iron oxide pigment manufactured by calcination method.

**2 Answer any two from the following:**

**14**

- 1) Discuss general properties of ceramics in detail.
- 2) Explain manufacturing of Refractories in detail.
- 3) Discuss Glazing of ceramic in detail.

**3 Answer the following:**

**14**

- 1) Discuss batch process for manufacturing of soap with process flow diagram.
- 2) Explain Detergent powder manufacturing process by sulphonation of dodecyl benzene.

**OR**

**3 Answer the following:**

**14**

- 1) Discuss recovery of glycerin from spent lye by Ancillary process.
- 2) Describe detrimental effects of Detergents in detail.

- 4 Answer any two from the following: 14**
- 1) Explain manufacturing of Paints with Block diagram.
  - 2) Discuss Cobalt and Iron blue Pigment in detail.
  - 3) Explain PVC and Paints removers in detail.

- 5 Answer any two from the following: 14**
- 1) Define Paints. Enlist and explain classification of Paints on the basis of their applications.
  - 2) Explain various application methods of colors to Pottery.
  - 3) Explain: i) Chrome Green Pigment ii) Guignet's Green Pigment
  - 4) Explain properties of Fire Clay Refractories in detail.
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