

17339

16172

3 Hours / 100 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 TEN of the following:** **20**
- Define pH and write acceptable pH value of water used for wet processing.
 - Distinguish between temporary and permanent hardness of water (two points).
 - Draw the structure of cellulose.
 - What is the role of soap and detergents in textile wet processing.
 - Define oils and fats.
 - Define fuel and classify it with one example.
 - Define calorific value and write its unit.
 - Define corrosion and write its types.
 - Why the galvanised containers cannot be used for storage of food-stuff?
 - List various types of titration.

P.T.O.

- k) State the factors affecting stability of complex ions.
- l) State applications of sodium carbonate.

2. Attempt any FOUR of the following: 16

- a) State four common impurities present in natural water.
- b) Write the ill effects of using hard water on textile wet processing.
- c) Explain the scales and sludges formation in boilers with the help of suitable diagram.
- d) State the meaning of following terms:
 - (i) priming and
 - (ii) foaming process.
- e) Define the term BOD and COD with suitable examples.
- f) Write the classification of carbohydrates with example.

3. Attempt any FOUR of the following: 16

- a) Write the action of enzymes on starch with chemical reaction.
- b) Define the terms: Congealing, Gelatinizing, Gelatinizing temperature, Viscosity.
- c) Write the action of alkali and oxidizing agent on cellulose.
- d) Write the method to determine saponification value of an oil with suitable diagram.
- e) Explain the term hydrogenation reaction of oil with chemical reactions.
- f) State about the property, soap solution as an colloidal electrolyte.

- 4. Attempt any FOUR of the following:** **16**
- a) Explain the surface tension and interfacial tension lowering property of soap.
 - b) State the characteristics of good fuel.
 - c) Write the applications of fuel in textile industry.
 - d) Distinguish between dry and wet corrosion.
 - e) Write the factors affecting rate of corrosion.
 - f) Explain the cathodic protection of metal by sacrificial anode method with labelled diagram.
- 5. Attempt any FOUR of the following:** **16**
- a) Distinguish between Galvanising and Tinning.
 - b) Write the process of protecting an article by electroplating with labelled diagram.
 - c) Define the terms: Accuracy and Precision.
 - d) Classify the methods of chemical analysis. Explain any one of titration method.
 - e) Define:
 - (i) Primary standard
 - (ii) Secondary standard with suitable examples.
 - f) Write about volumetric methods of estimation of testing of chemicals.
- 6. Attempt any FOUR of the following:** **16**
- a) State the four points to distinguish between co-ordination compound and ionic compounds.
 - b) Discuss Werner's co-ordination theory.
 - c) State the uses of important sequestering agents in textiles.
 - d) State the chemical properties of hydrochloric acid with chemical reactions.
 - e) Write the applications of sodium hydroxide in textile industry.
 - f) Write the chemical properties of sodium carbonate with chemical reactions.
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