17339

11819

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) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

(6) Abbreviations used convey usual meaning.

Marks

1. Attempt any TEN of the following: **20**

a) Name the common impurities present in water.

b) Define -

(i) Scales

(ii) Sludges

c) Explain keeping property of starch paste.

d) Distinguish between oils and fats giving an example of each.

e) Describe foaming property of soap.

f) State two characteristics of good fuel.

g) State two examples of each of solid, liquid and gaseous fuels.

h) Describe atmospheric corrosion.

i) Draw a schematic diagram of electroplating.

j) List the factors affecting stability of complex ions.

Marks

k) Define primary standards with an example.

l) Write two chemical properties of hydrochloric acid.

m) Compare alkalinity of sodium carbonate and sodium hydroxide.

n) Write two applications of sodium hydroxide in textiles.

2. Attempt any FOUR of the following: **16**

a) Describe ion exchange process with a diagram.

b) What is gelatinising? Explain it w.r.t. starch paste.

c) Explain the following chemical properties of oil :

(i) Water hydrolysis

(ii) Alkali hydrolysis

d) Distinguish between dry-and wet-corrosion.

e) Distinguish between accuracy and precision.

f) Describe Werner's co-ordination theory.

3. Attempt any FOUR of the following: **16**

a) Describe a method of removal of micro organisms from water.

b) (i) Define S.V. of an oil 1

(ii) Explain principle involved in its estimation. 3

c) State the applications of solid and liquid fuels in textile industry.

d) Explain control of corrosion by sacrificial anode and external current method.

e) Explain complexometric titration giving an example.

f) Mention uses of important sequestering agents in textile industry.

Marks

4. Attempt any FOUR of the following: **16**

a) Explain BOD and COD with examples.

b) Explain action of acid and oxidising agent on cellulose.

c) Explain the terms:

(i) Net calorific value,

(ii) Gross calorific value. Which of them in bigger?

d) Describe the method of galvanisation.

e) Describe with an example titration using 'precipitation'. Write reaction involved.

f) Explain applications of sulphuric acid in textiles.

5. Attempt any FOUR of the following: **16**

a) Explain permanent and temporary hardness of water. State their units.

b) Explain the action of enzymes on starch.

c) Describe soap solution as colloidal electrolyte.

d) Describe process of cementation.

e) Distinguish between coordination compounds and coordination number.

f) Explain applications of sodium carbonate in textiles.

Marks

6. Attempt any FOUR of the following: 16

a) Explain the adverse effects of using hard water on textiles.

b) Explain the terms:

(i) Poly saccharides

(ii) Disaccharides

Give an example of each.

c) Define the following properties of soap :

(i) Wetting property

(ii) Surface tension

(iii) Suspending powers

(iv) Detergent property

d) Mention the factors affecting the rate of corrosion and explain any two of them.

e) Explain with reaction, 'redox' titration.

f) What is a chelate? Explain its formation, giving two examples.