17339

21819

3 Hours / 100 Marks Seat No. | | | | | | | | |

Instructions – (1) All Questions are *Compulsory.*

(2) Answer each next main Question on a new page.

(3) Figures to the right indicate full marks.

(4) Assume suitable data, if necessary.

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

Marks

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

a) What is meant by PPM? Write relation between PPM and mg/lit?

b) Define viscosity. Write its unit.

c) Define saponification value.

d) Define :

(i) Net calorific value,

(ii) Gross calorific value.

e) Explain meaning of cementation.

f) Define Qualitative analysis. Give an example.

g) What is a chelate? Give two examples.

h) Write application of sodium carbonate in textiles.

i) What is scale? How does it form?

j) Draw the representative structure of starch.

Marks

k) Define:

(i) Soap,

(ii) Detergents.

l) Define fuel : Write its applications in textiles.

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

a) Distinguish between dry corrosion and wet corrosion.

b) Describe titration through precipitation. Give an example.

c) List the factors affecting the stability of complex ions and coordination compounds.

d) Explain two chemical properties and two caustic soda in textiles.

e) Explain concept of BOD and COD.

f) Explain principle of reverse osmosis. State its application.

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

a) Explain action of acid and alkali on cellulose.

b) Explain water hydrolysis and alkali hydrolysis of oils.

c) Give the classification of fuels giving examples.

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

e) Explain redox titration with an example.

f) Explain Werner's co-ordination theory.

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

a) (i) State precautions to be taken in handling sulphuric acid.

(ii) List out applications of sulphuric acid in textiles.

b) Define :

(i) pH

(ii) pH scale,

(iii) Dissolved oxygen,

(iv) Priming

Marks

c) Explain Hardness. Name its types and write units.

d) Explain gelatinizing of starch paste.

e) Explain surface tension and interfacial tension lowering properties of soaps.

f) List out the characteristics of fuel.

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

a) State the factors effecting rate of corrosion.

b) Describe acid base titration. Name commonly used indicator and the colour changes.

c) Write down uses of important sequestering agents in textiles.

d) Name impurities present in water. Write there on textile wet processing.

e) Describe action of enzymes on starch.

f) Explain soap solution as a colloidal electrolyte.

6. Answer any FOUR of the following: **16**

a) Distinguish galvanising and tinning.

b) Explain role of alloys in protection of corrosion

c) Define the terms:

(i) Accuracy, Precision,

(iii) Primary, Secondary standards

d) Explain co-ordination number.

e) Write down two chemical properties and too uses of hydrochloric acid in textiles.

f) Explain following properties of soaps:

(i) Foaming property.

(ii) Suspending power.

———