



THE ANSWERS MUST BE ATTEMPTED ON THE ANSWER SHEET PROVIDED

Q.1. Answer the following short questions: (15x2=30)

- i. What are Hypsochromic groups?
- ii. What are the effects of impurities on the steel?
- iii. Give two applications of Electroplating.
- iv. What is the role of Monochromator in UV/VIS Spectroscopy?
- v. Give names and formula of important ores of iron.
- vi. What is meant by passivity of iron?
- vii. How flame photometer can be used to determine the sodium in glass?
- viii. Describe Flame Ionization Detector used in Gas Chromatography.
- ix. Why On-line analysis is important in Industry?
- x. What are the main constituents of Stainless Steel.
- xi. What is roughing in steel?
- xii. What are Reactive dyes.
- xiii. Give basic principle of Gas Chromatography.
- xiv. What are Mordants and give its role in dyeing?
- xv. What is Red Shift in UV Spectrum?

Q.2. Answer the following questions. (6x5=30)

- a) What is the Principle of HPLC? Give its applications in Pharmaceutical Industry.
- b) Explain the classification of Analytical Techniques w.r.t. Automation
- c) What are the Basic Operation involved in Dyeing?
- d) How Nickel Plating is carried out? Give its significance
- e) Explain the manufacturing of steel by Open Hearth Furnace method.
- f) Write a detail note on Classification of dyes.