



**THE ANSWERS MUST BE ATTEMPTED ON THE ANSWER SHEET PROVIDED**

**Q.1. Answer the following short questions:**

**(15x2=30)**

1. What is the mass of glucose required to prepare 500 cm<sup>3</sup> of its 0.1M solution?
2. What do you know about relative and absolute errors?
3. What is meant by quality control chart?
4. What are the limitations of Q-Test?
5. How do you calculate the standard deviation of given data?
6. Paper is a solid material but paper chromatography is partition chromatography, justify it.
7. Differentiate between Normal phase and reverse phase chromatography
8. How are TLC plates prepared?
9. What is the basic principle of chromatography?
10. Name some adsorbents used in Column Chromatography.
11. What is the effect of conjugation on absorption maximum?
12. Differentiate between emission and absorption spectroscopy
13. What are auxochromes? Give examples.
14. What are electromagnetic radiations?
15. Enlist two applications of Beer Lambert's law.

**Q.2. Answer the following questions.**

1. a) Explain the methods of minimizing the errors. (5)  
b) What is meant by quality control charts? What are its advantages? (5)
2. a) Discuss the factors affecting R<sub>f</sub> value in paper chromatography (5)  
b) How can you detect colorless spots in TLC? (5)
3. a) Explain various transitions possible in atoms and molecules. (5)  
b) Compare single beam and double beam spectrophotometer (5)