

**2013**

**P.G. Diploma in  
Quality Control and Assurance in  
Microbial Technology**

**PAPER—MT-103**

*Full Marks : 50*

*Time : 2 Hours*

*The figures in the right-hand margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

*Illustrate the answers wherever necessary.*

**Write the answers of each question of each Group in Separate Book.**

**Answer any Five Questions from Each Group.**

**Group—A**

*[Marks—25]*

*Answer any five questions.*

1. What is a type culture of bacteria? Name two microbial culture collection centre in India. Briefly describe one important methods for preserving bacterial culture over many years.

1+1+3

*(Turn Over)*

2. Describe each of the following agents in terms of its chemical nature, mechanism of action, mode of application and effectiveness of (any two) :  $2\frac{1}{2}+2\frac{1}{2}$
- (a) Phenolics;
  - (b) Chlorine;
  - (c) Aldehydes.
3. (a) Define with example the term Antisepsis and Disinfection. 3+2
- (b) Define Phenol co-efficient. 3+2
4. What are the general guidelines for storage of chemicals and reagents. Write the precautions for storing oxidizing materials? 3+2
5. What are hazardous wastes? Write the appropriate disposal methods for hazardous wastes. 1+4
6. What do you mean by biological hazards? What are the types of biological hazards and explain any one of them. 1+4
7. What method of sterilization would be appropriate for each of the following? 1×5
- (a) Petri dishes;
  - (b) Heater;

- (c) Nutrient Broth;
- (d) A dry powder product;
- (e) A heat labile solution of vitamins.
8. Why Laminar airflow cabinet has become so important in laboratories. 5

**Group—B**

[Marks—25]

Answer any *five* questions :

1. What do you mean by drugs? What is the difference between vaccines and drugs? 2+3
2. What is GMP? Brief the GMP Guidelines. 1+4
3. Write the regulation of pharmaceutical drugs in India. 5
4. What is QSM? Explain ISO 9001 and 14001 briefly. 1+2+2
5. What is GLP? What are the elements of GLP. 1+4
6. Classify pharmaceutical products and make a product tree. 5

7. Elaborate microbiological quality attributes of drugs substance and excipients.

5

8. What might be common chemical hazards faced in a laboratory? How can they be prevented? Mention the safety guidelines that should be present with chemicals.

5

---