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**BPHARM**  
**(SEM III) THEORY EXAMINATION 2024-25**  
**PHARMACEUTICAL MICROBIOLOGY**

TIME: 3 HRS

M.MARKS: 75

**Note:** 1. Attempt all Sections. If require any missing data; then choose suitably.

**SECTION A**

**1. Attempt all questions in brief.**

**10 x 2 = 20**

a.	Define D-value and Z-value.
b.	Explain IMViC test and its importance.
c.	Write contribution of Robert Koch and Louis Pasteur in Microbiology.
d.	Define microbiological assay and its importance.
e.	Define and classify clean room.
f.	Name methods used to evaluate air quality in aseptic area.
g.	Explain cell line and its types.
h.	Differentiate between mold and fungi.
i.	Describe the sources of contamination in the aseptic area.
j.	Explain antimicrobial agents with example.

**SECTION B**

**2. Attempt any two parts of the following:**

**2 x 10 = 20**

a.	Explain the working principle and application of phase contrast microscopy with a diagram.
b.	Discuss the principle and procedure of acid-fast staining.
c.	Describe sterilization and details of physical methods of sterilization with diagram.

**SECTION C**

**3. Attempt any five parts of the following:**

**5 x 7 = 35**

a.	Write a detailed note about culture media and its composition and types.
b.	Discuss methods used for quantitative measurement of bacterial growth.
c.	Explain the phenol coefficient method of disinfectant evaluation.
d.	Discuss methods used for sterility testing of pharmaceuticals.
e.	Describe methods used for antibiotics standardization. .
f.	Discuss the design, construction, and layout of the aseptic area.
g.	Explain the importance of cell culture in pharmaceutical industry.