

Pokhara University Teaching Hospital
Curriculum for Lab Assistant (Assistant) Level Examination

For Written Examination
Full Marks: 65

There shall be 3 hrs. written examination based on the following syllabus:

Group A: Written Examination

65 Marks

1. Hematology (10)

Composition of blood, Collection of blood samples, Anticoagulants, Sahli's haemoglobinometer, haemo cytometers, pipettes, Neubauer chamber, thin and thick blood smears and safety in lab.

2. Microbiology (25)

Bacteriology: Morphology of bacteria. Sample collection. staining procedure. Safety precautions and disposal of infected material. Culture media, sterilization and disinfection.

Parasitology: Introduction to parasitology: laboratory diagnosis of different parasites. Preparation of reagents: normal saline, Iodine solution and 33% ZnSo₄ solution.

Virology: General properties, classification of virus. laboratory diagnosis of viral diseases

Mycology: Sample collection for fungal infection (skin, nail, and hair) Preparation of different types of chemicals and stains; KOH and Indian ink.

Immunology: Antigen & antibodies: Type of reaction: flocculation, precipitation & agglutination.

3. Biochemistry (20)

Basic chemistry- matter, substance, atom and molecules element, compound. Solution- Preparation of normal solution. Cleaning of glass-wares. Instruments: Colorimeter, Centrifuge, Balance, Refrigerator. Law of colorimetry - Beer's and Lambert's law. Preparation of reagents.

4. Anatomy and Physiology: Different organ systems and its function (5)

5. Histology and Cytology: Fixatives, decalcification and tissue cutting section (5)

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For Practical Examination
Full Marks: 35

Practical examination based on the following syllabus:

Group B: Practical Examination

35 Marks

1. Hematology:

Preparation of chemicals and different stains for the Hematological tests: Hemoglobin, Total count of W.B.C, R.B.C, E.S.R., B.T., C.T, and Blood grouping and RH type.

2. Microbiology:

Bacteriology: Different staining methods of bacteria, Instruments: Handling and use of Microscope, incubators, hot air oven, water bath, refrigerator, and analytical balance. Urine analysis, culture.

Immunology: Perform A.S.O., C.R.P, Rheumatoid factor VDR L and HIV tests.

Parasitology: Preparation of normal saline and Iodine, Routine examination of stool.

Mycology: Prepare 10% KOH solution, India ink and Perform skin/nail/hair-scraping.

3. Biochemistry:

Perform blood glucose, urea, creatinine, uric acid and albumin. Urinary glucose test by Benedict's & strip methods. Preparation of Benedict's reagents.
