



**DEPARTMENT OF PATHOLOGY BENAZIR BHUTTO
HOSPITAL RAWALPINDI MEDICAL UNIVERSITY**

No:406/PATH/BBH/23

Aug_05th_2023

Subject: **TOS FOR PHD CHEMICAL & MOLECULAR PATHOLOGY ENTRY TEST AND
NOMINATION OF EXTERNAL EXAMINERS.**

PHD Chemical Molecular Pathology Entry test TOS 2023

Topic	Learning Domain	MCQ
Pathophysiology- including following topics: <ul style="list-style-type: none">• Electrolytes• Acid Base Disorders• Liver Function Tests• Renal Function Tests• Lipid Profile	C2, C3, C4	15
<ul style="list-style-type: none">○ Basic Laboratory Principles of Quality Management of Laboratory Basic Instrument Handling○ Centrifuge○ Water Bath○ Pipettes○ Glass ware○ Refrigerators○ Osmometers○ Analytical Balance	C2, C3, C4	10

<ul style="list-style-type: none"> ○ pH Meter 		
<p>Analytical Techniques /Lab instruments</p> <ul style="list-style-type: none"> ○ Optical Techniques ○ Electrochemistry ○ Electrophoresis ○ Lab Automation ○ ELISA 	C2, C3, C4	10
<p>Endocrinology including following topics:</p> <ul style="list-style-type: none"> ○ Diabetes Mellitus ○ Thyroid Disorders ○ Parathyroid Disorders ○ Adrenal Disorders ○ Pituitary Disorders 	C2, C3, C4	10
<p>Special Clinical Chemistry</p> <ul style="list-style-type: none"> ● Tumour Markers ● Paediatric Metabolic Disorder 	C2, C3, C4	5

<ul style="list-style-type: none"> • Therapeutic Drug Monitoring • Toxicology 		
<p>Laboratory Management</p> <ul style="list-style-type: none"> • Clinical evaluation of methods • Establishment and use of reference values • Preanalytical variables and biological variation • Laboratory Information System 	C2, C3, C4	10
<p>Molecular Biology</p> <ul style="list-style-type: none"> • DNA: Structure and Function • RNA: Structure and Function & Types • Protein: Structure and Function • DNA regulatory sequences and regulatory protein • DNA Replication, Damage and Repair • Transcription/ Translation in Prokaryotes& 	C2, C3, C4	10

Eukaryotes		
<ul style="list-style-type: none"> • PCR types and procedure • DNA/RNA Extractions <ul style="list-style-type: none"> o Restriction Endonucleases • Recombinant DNA technology 	C2, C3, C4	10
<ul style="list-style-type: none"> • Research Methodology • Biostatistics/Analytical techniques • Medical writing/Bioethics 	C2, C3, C4	10
Total		100

EXTERNAL EXAMINERS:

1. Prof. Dr. Sami Saeed PhD
Fauji Foundation Medical College, Rawalpindi.
2. Prof. Dr. Shazia
Riphah International University, Islamabad.


HEAD DEPARTMENT OF PATHOLOGY
PROF. DR. WAFA OMER
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CC:

1. The Vice Chancellor, RMU, RWP.
2. Controller Examination, RMU
3. Coordinator Diploma Programs RMU
4. All Concerned
5. Master File