

## Description of Examinations -- Subspecialty

All examinations given by the American Board of Pathology are multiple-choice, computerized examinations given at the ABP examination center in Tampa, Florida. The examinations do not require any special computer skills or experience. A practice session is held before the certification examination begins. **It is important that candidates read and understand all material sent in advance by the ABP and that candidates for anatomic pathology go through the practice examination in virtual microscopy that is available on the ABP Web site.**

### ***Subspecialty in Blood Banking/Transfusion Medicine***

The examination in blood banking/transfusion medicine is a one-day, computer-based examination consisting of written and practical sections of the examination administered as follows:

Section	Questions	Time
Written	120	2 hours
Practical	180	4.5 hours

A candidate must pass both the written and the practical portions of the examination in the same administration in order to pass the examination. All questions are multiple-choice and in the one-best-answer format. The questions are designed to measure the candidate's body of knowledge and problem-solving ability. The practical examination includes blood testing panels, graphs, charts, tables, or other images.

Subject areas covered include, but are not limited to:

- Blood, Plasma, Components  
donor criteria; collection and storage; processing, labeling, and storage; indications for use; and consultation
- Immunohematology, Genetics, Transplantation  
blood groups, antigen/antibody detection and identification, immune hemolytic anemias, hemolytic disease of the newborn, tissue and organ transplantation and consultation, compatibility testing, tissue banking
- Transfusion Practices and Sequelae  
blood component therapy; specific clinical aspects, indications, and consultation; transfusion techniques; sequelae; and consultation
- Hemapheresis, Donor Apheresis, Therapeutic Apheresis  
clinical indications and consultation, procedures and techniques, complications and consultations
- History, Administration, Management, and Regulation  
AABB standards, FDA regulations, quality control and assurance, general management principles,

***Subspecialty in Chemical Pathology***

The examination in chemical pathology is a one-day, computer-based examination consisting of written and practical sections administered as follows:

<u>Section</u>	<u>Questions</u>	<u>Time</u>
Written	120	2 hours
Practical	180	4 hours

A candidate must pass both the written and the practical portions of the examination in the same administration in order to pass the examination. All questions are multiple-choice and in the one-best-answer format. The questions are designed to measure the candidate's body of knowledge and problem-solving ability. The practical examination includes graphs, charts, formulas, diagrams, tables, or other images.

Subject areas covered include, but are not limited to:

- Laboratory administrative and management requirements and practices
- Patient preparation and specimen collection
- Standards and units of measurement
- Calculations and statistics
- Quality control
- Instrumentation and equipment
- Analytic methods and techniques
- Disorders of metabolism
- Electrolyte and acid/base disorders
- Serum protein and coagulation abnormalities
- Chemical disorders and clinical aspects of organ and system diseases
- Diagnostic application of laboratory data
- Screening and home-testing procedures
- Drug abuse, overdose, and testing
- Patient care decision-making and consultation

### ***Subspecialty in Cytopathology***

The examination in cytopathology is a one-day, computer-based examination consisting of written and practical sections. The practical section is composed of a microscopic portion (traditional and virtual) and an image section. The examination is administered as follows:

<u>Section</u>	<u>Questions</u>	<u>Time</u>
Written	130	2 hours
Practical		
Images	128	2.5 hours
Microscopic/virtual	37/5*	2.75 hours

\*Note: change from 2009.

A candidate must pass both the written and the practical portions of the examination in the same administration in order to pass the examination. All questions are multiple-choice and in the one-best-answer format. The questions are designed to measure the candidate's body of knowledge and problem-solving ability. The written examination includes theoretical, practical, administrative, regulatory, and interpretive and problem solving aspects of cytopathology relative to disease processes and patient care. The practical examination (images) includes interpretive and problem-solving aspects of cytologic specimens, including questions about disease processes. The microscopic examination includes diagnosis and correlation with histologic and clinical findings and may include virtual images.

Subject areas covered include, but are not limited to:

- Technical Aspects, Diagnostic Interpretations, and Prognostic Significance  
methods of obtaining material, handling and processing of specimens, special immunohistochemical procedures, labeling of cells, flow cytometry, and molecular techniques
- Sources of Cells  
cells obtained by exfoliation, scraping, lavage, brushing, and fine-needle aspiration and cells in secretions and discharges
- Pathogenesis and Prognostic Significance  
cytologic specimens obtained from the female reproductive system, urinary system, respiratory system, gastrointestinal system, breast, central nervous system, solid organs; includes normal, reactive, infectious, and neoplastic specimens
- Staining Methods  
Papanicolaou, Diff-Quik, or other stains for air-dried specimens, H&E, and special stains including immunocytochemical methods
- Histologic/Cytologic Correlation, Patient Care Decision Making, Management Guidelines, Consultation
- Quality Assurance, Practice Improvement, Laboratory Management, Safety, Federal Regulations

***Subspecialty in Dermatopathology***

The examination in dermatopathology is a one-day, computer-based examination consisting of written and practical sections. The practical section is composed of a microscopic section (traditional and virtual) and an image section. The examination is administered as follows:

Section	Questions	Time
Written	100	1.5 hours
Practical		
Images	108	2.25 hours
Microscopic/virtual	95/5*	4 hours

\*Note: change from 2009.

A candidate must pass both the written and the practical portions of the examination in the same administration in order to pass the examination. All questions are multiple-choice and in the one-best-answer format. The questions are designed to measure the candidate's body of knowledge and problem-solving ability. The practical examination includes images of gross lesions and special technical subjects including immunofluorescent, histochemical, microbiologic, and cytologic preparations.

Subject areas covered include, but are not limited to:

- Diagnostic dermatopathology and relative clinical and laboratory knowledge
- Gross and microscopic diagnosis of skin disorders by direct visual inspection and light, fluorescent, and electron microscopy and histochemical, bacteriologic, mycologic, virologic, and entomologic preparations
- Laboratory management, quality assessment and assurance, patient care decision making, and consultation

***Subspecialty in Forensic Pathology***

The examination in forensic pathology is a one-day, computer-based examination consisting of written and practical sections. The practical section is composed of a microscopic portion (traditional and virtual) and an image section. The examination is administered as follows:

<u>Section</u>	<u>Questions</u>	<u>Time</u>
Written	125	1.75 hours
Practical		
Images	125	2.25 hours
Microscopic/virtual	50/0	3 hours

A candidate must pass both the written and the practical portions of the examination in the same administration in order to pass the examination. All questions are multiple-choice and in the one-best-answer format. Questions related to microscopic slides may be accompanied by an image or images (scene photograph, gross photograph, radiograph, etc). The questions are designed to measure the candidate's body of knowledge and problem-solving ability.

Subject areas covered include, but are not limited to:

- Pathology and interpretation of natural disease, therapy, and trauma
- Interpretation of injury patterns and stigmata
- Pathology and certification of natural and violent deaths
- Interpretation of clinical and postmortem chemistries and toxicologies
- Molecular biology, forensic odontology, physical anthropology
- Criminalistics, public health, jurisprudence, management, and safety

***Subspecialty in Hematology***

The examination in hematology is a one-day, computer-based examination consisting of written and practical sections. The practical section is composed of a microscopic portion (traditional and virtual) and an image section. The examination is administered as follows:

<u>Section</u>	<u>Questions</u>	<u>Time</u>
Written	150	2 hours
Practical		
Images	110	2.25 hours
Microscopic/virtual	35/5	2.75 hours

A candidate must pass both the written and the practical portions of the examination in the same administration in order to pass the examination. All questions are multiple-choice and in the one-best-answer format. The questions are designed to measure the candidate's body of knowledge and problem-solving ability. The practical examination includes blood and bone marrow smears, imprints, and tissue sections.

Subject areas covered include, but are not limited to:

- Methodology
- Hematopoiesis
- Erythrocyte disorders
- Leukocyte disorders
- Lymph node disorders
- Blood vessels and hematologic disorders
- Platelets and platelet disorders
- Blood coagulation
- Patient care decision making and consultation

***Subspecialty in Medical Microbiology***

The examination in medical microbiology is a one-day, computer-based examination consisting of written and practical sections administered as follows:

<u>Section</u>	<u>Questions</u>	<u>Time</u>
Written	200	3 hours
Practical with images	150	4 hours

A candidate must pass both the written and the practical portions of the examination in the same administration in order to pass the examination. All questions are multiple-choice and in the one-best-answer format. The questions are designed to measure the candidate's body of knowledge and problem-solving ability.

Subject areas covered include, but are not limited to:

- Medical microbiology administrative and management practices
- Quality control and infection prevention
- Taxonomy, classification, and nomenclature
- Collection, handling, and processing of specimens
- Pathogenic mechanisms of infectious diseases and host-parasite relationships
- Antimicrobial mechanisms of action and susceptibility testing
- Media reagents and stains
- Aerobic bacteria: Cultural and morphologic characteristics and infections
- Anaerobic bacteria: Cultural and morphologic characteristics and infections
- Spirochetes: Morphologic characteristics and infections
- Fungi: Cultural and morphologic characteristics and infections
- Viruses and Rickettsia: Cultural and morphologic characteristics and infections
- Parasites: Morphologic characteristics and infections
- Historical aspects of medical microbiology
- Patient care decision making and consultation

***Subspecialty in Molecular Genetic Pathology***

The examination in molecular genetic pathology is a one-day, computer-based examination administered as follows:

<u>Section</u>	<u>Questions</u>	<u>Time</u>
Written	100	1.75 hours
Practical		
Practical	100	2.25 hours
Practical with Images	100	2.5 hours

A candidate must pass both written and practical portions of the examination in the same administration in order to pass the examination. All questions are multiple-choice and in the one-best-answer format. The questions are designed to measure the candidate's body of knowledge and problem-solving ability. Questions may include karyotypes, gels, graphs, pedigrees, or other images.

Subject areas covered include, but are not limited to:

- Normal structure/function, basic molecular techniques/methods, human genetic principles including DNA/RNA structure, transcription/translation, types of mutation and their detection, gene structure and function, population and risk calculation
- Quality improvement, quality control, quality assurance and ethical, legal, and regulatory issues relating to molecular genetic laboratory testing
- Inherited disorders of single and multiple genes and genes of mitochondrial origin
- Neoplastic diseases and other acquired disorders
- Infectious diseases
- Identity testing, histocompatibility, immunologic diseases, and forensic testing

***Subspecialty in Neuropathology***

The examination in neuropathology is a one-day, computer-based examination consisting of written and practical sections. The practical section is composed of a microscopic portion (traditional and virtual) and an image section. The examination is administered as follows:

Section	Questions	Time
Written	100	1.75 hours
Practical		
Images	90	1.75 hours
Microscopic/virtual	60/0	3.5 hours

A candidate must pass both the written and the practical portions of the examination in the same administration in order to pass the examination. All questions are multiple-choice and in the one-best-answer format. The questions are designed to measure the candidate's body of knowledge and problem-solving ability.

Subject areas covered include, but are not limited to:

- Diagnostic neuropathology and patient care consultation
- Theoretical, investigative, and administrative aspects of neuropathology
- Specimens from the central or peripheral nervous systems, muscles, and organs of special senses
- Relevant areas of general pathology

### ***Subspecialty in Pediatric Pathology***

The examination in pediatric pathology is a one-day, computer-based examination consisting of written and practical sections. The practical section is composed of a microscopic portion (traditional and virtual) and an image section. The examination is administered as follows:

Section	Questions	Time
Written	120	1.5 hours
Practical		
Images	90	2 hours
Microscopic/virtual	60/0	3.5 hours

A candidate must pass both the written and the practical portions of the examination in the same administration in order to pass the examination. All questions are multiple-choice and in the one-best-answer format. The questions are designed to measure the candidate's body of knowledge and problem-solving ability. The written examination includes theoretical, practical, and interpretive aspects of pediatric pathology relative to disease processes and patient care. The practical examination includes images of gross specimens, cytogenetic preparations, graphs, charts, and special histochemical and other techniques. The microscopic examination includes tissue sections and hematologic and cytologic smears pertaining to diagnosis, implications, and prognosis.

Subject areas covered include, but are not limited to:

- Embryologic development and pathology of organ systems
- Abnormalities of the placenta and amniotic fluid
- Cytogenetic techniques and interpretations
- Perinatal and iatrogenic problems
- Congenital malformations and complexes
- Metabolic and immunologic principles and disorders
- Infectious diseases
- Neoplasia and neoplastic diseases
- Handling and processing of specimens, special histochemical procedures, labeling of cells, flow cytometry, DNA hybridization, DNA imaging, and other techniques using DNA probes
- Pathogenesis and prognostic significance of diseases in tissue specimens, cytologic smears, and electron micrographs
- Pediatric aspects of other areas of pathology, including neuropathology, hematology, blood banking/transfusion medicine, microbiology, chemical pathology, and forensic pathology
- Laboratory management and quality assurance and their implementation