## ✓ Exam Master

#### **EXAM MASTER CORPORATION**

### Didactic/Pharmacy Curriculum Outcome Assessment (PCOA) Exams

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Exam Master's updated PCOA Benchmark Exam Version 4 is organized based on the NABP's blueprint for the actual PCOA. Table 1 displays the number of test items for each of the content areas, weighted similarly to the actual blueprint.

Table 1: PCOA Benchmark Exam Topic Breakdown v4

Content Area – PCOA Version 4	Number of Questions
Basic Biomedical Sciences	23
Physiology	12
Biochemistry	6
Microbiology	2
Immunology	3
Pharmaceutical Sciences	74
Medicinal Chemistry	24
Pharmacology & Toxicology	15
Pharmacognosy	6
Pharmaceutics	5
Pharmacokinetics	8
Pharmacogenomics/Genetics	4
Compounding	12
Social/Behavioral/Administrative Sciences	50
Health Care Delivery Systems	4
Population-Based Care	3
Economic/Humanistic Outcomes	1
Pharmacy Practice Management	10
Pharmacy Law	4
Biostatistics/Research Design	5
Ethical Decision Making	1
Professional Communication	6
Social/Behavioral Aspects	11
Medication Dispensing	5
Clinical Sciences	78
Evidence-Based Practice	11
Clinical Pathophysiology	3
Clinical Pharmacokinetics	7
Clinical Pharmacogenomics	4
Disease Prevention	7
Patient Assessment	26
Clinical Pharmacology	20
Total Questions	225

Table 2 provides a breakdown of the number of questions in the PCOA Benchmark Exam by Bloom's Taxonomy cognitive levels. Many items are designed to test examinees' ability to apply their basic science knowledge to pharmaceutical, social, behavioral, administrative, and clinical science scenarios.

Table 2: Cognitive Breakdown of PCOA Benchmark Exam v4

Cognitive Level – PCOA Version 4	%	Number of Questions
Knowledge	28%	63
Comprehension	26%	58
Application	37%	84
Analysis	9%	20

#### **Pre-Built Didactic/PCOA Exams**

Exam Master also has developed four additional pre-built Didactic/PCOA exams that can be used to help identify individual student and/or cohort weaknesses in the following specific topical areas: Basic Biomedical Sciences, Pharmaceutical Sciences, Clinical Sciences, and Social/Behavioral/Administrative Sciences.

All questions in the Didactic/PCOA Question Bank and Exams contain detailed explanations and rationales. The following Tables (3 to 6) provide the topic and cognitive level breakdown for each Didactic/PCOA exam with question counts.

Table 3: Basic Biomedical Sciences Exam Subject & Cognitive Level Breakdown

Basic Biomedical Sciences	
Subject	Number of Questions
Physiology	23
Microbiology Related to Human Disease	5
Immunology	8
Biochemistry	14
Subject Total	50
Cognitive Level	Number of Questions
Knowledge	19
Knowledge Comprehension	,
3	19
Comprehension	19 21

Table 4: Pharmaceutical Sciences Exam Subject & Cognitive Level Breakdown

Pharmaceutical Sciences	
Subject	Number of Questions
Pharmacokinetics	5
Pharmacognosy and Alternative and	
Complementary Treatments	6
Pharmacology and Toxicology	11
Sterile and Nonsterile Compounding	8
Pharmacogenomics and Genetics	3
Medicinal Chemistry	9
Pharmaceutics/Biopharmaceutics	8
Subject Total	50
Cognitive Level	Number of Questions
Knowledge	17
Comprehension	16
Application	13
Analysis	2
Synthesis	1
Evaluation	1
Cognitive Level Total	50

Table 5: Clinical Sciences Exam Subject & Cognitive Level Breakdown

Clinical Sciences		
Subject	Number of Questions	
Clinical Pharmacology and Therapeutic		
Decision Making	13	
Disease Prevention and Population		
Health	6	
Evidence-Based Practice	11	
Patient Assessment	12	
Clinical Pharmacokinetics	4	
Clinical Pathophysiology	2	
Clinical Pharmacogenomics	2	
Subject Total	50	
Subject Total	30	
Cognitive Level	Number of Questions	
	Number of	
Cognitive Level	Number of Questions	
Cognitive Level Knowledge	Number of Questions	
Cognitive Level  Knowledge  Comprehension	Number of Questions 16	
Cognitive Level  Knowledge  Comprehension  Application	Number of Questions 16 7 19	
Cognitive Level  Knowledge Comprehension Application Analysis	Number of Questions 16 7 19 6	

Table 6: Social/Behavioral/Administrative Sciences Exam Subject & Cognitive Level Breakdown

Social/Behavioral/Administrative Sciences		
Subject	Number of Questions	
Social and Behavioral Aspects		
Encountered in Practice	5	
Medication Dispensing and Distribution		
Systems	3	
Health Care Delivery Systems and		
Public Health	8	
Population-Based Care and		
Pharmacoepidemiology	4	
Pharmacy Law and Regulatory Affairs	6	
Professional Communication	4	
Ethical Decision Making	2	
Biostatistics and Research Design	4	
Pharmacy Practice Management	12	
Economic and Humanistic Outcomes of		
Health Care Delivery	2	
Subject Total	50	
Cognitive Level	Number of	
Cognitive Level	Questions	
Knowledge	20	
Comprehension	12	
Application	15	
Analysis	2	
Synthesis	0	
Evaluation	1	
Cognitive Level Total	50	

After students take any of these four 50-Question topical exams or the 225-Question PCOA Benchmark Exam and weaknesses are identified, a Didactic/Pharmacy Curriculum Outcome Assessment (PCOA) question bank of over 650 questions can be used for additional remediation. Questions can be reviewed in study and learning modes. All questions contain detailed explanations and rationales and have been carefully reviewed and vetted by pharmacy educators.

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Note: Exam Master has no affiliation with the National Association of Boards of Pharmacy and this resource is not endorsed by the NABP.