Levels of Thinking – Bloom’s Taxonomy – Exam Preparation

Benjamin Bloom created this taxonomy for categorizing questions that commonly occur in educational settings based on the level of abstraction, or thinking, involved. There are six levels in Bloom’s taxonomy which are outlined below. Since professors will often ask questions within particular levels, if you can determine the levels of questions that will appear on your exams, you will be able to study using appropriate strategies.

Try using the following study strategies to prepare for questions based on the different levels of thinking.

<table>
<thead>
<tr>
<th>Level of Thinking</th>
<th>Question Cues</th>
<th>Skills Demonstrated</th>
<th>Suggested Study Strategies</th>
</tr>
</thead>
</table>
| Knowledge: Recall information such as a term and its definition | list, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, name, who, when, where | • Observation and recall of info  
• Knowledge of dates, events, places  
• Knowledge of major ideas  
• Mastery of subject matter | • Flash cards  
• Mnemonic devices (rhymes, acronyms)  
• Recite/rehearse facts  
• Visual imagery |
| Comprehension: Characteristics of concepts, putting an idea into your own words | summarize, describe, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend | • Understanding information  
• Grasp meaning  
• Translate knowledge into new concept  
• Interpret facts, compare, contrast  
• Order/group/infer causes  
• Predict consequences | • Associate material with prior knowledge  
• Cluster details into categories and label with key words  
• Memorize characteristics |
| Application: Using ideas, principles and theories in concrete situations | apply, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover | • Use information  
• Use methods, concepts, theories in new situations  
• Solve problems using required skills or knowledge | • Outline procedures  
• Diagram processes  
• Generate original examples  
• Solve and analyze new problems |
| Analysis: Breaking down information into component parts to examine/develop divergent conclusions, or make organization or the order of ideas clear | analyze, separate, order, explain, connect, classify, arrange, divide, compare, select, explain, infer | • Seeing patterns  
• Organization of parts  
• Recognition of hidden meanings  
• Identification of components | • Generate comparison and contrast lists  
• Identify themes/trends from text or case studies  
• Make tables that show relationships between elements |
| Synthesis: Putting together the parts and elements into a unified whole | combine, integrate, modify, rearrange, substitute, plan, create, design, invent, compose, formulate, prepare, generalize, rewrite, what if? | • Use old ideas to create new ones  
• Generalize from given facts  
• Relate knowledge from several areas  
• Predict/draw conclusions | • Make global maps to summarize each block of information  
• Generate a thesis to support certain evidence  
• Locate evidence to support a thesis |
| Evaluation: Judging the value of ideas, procedures, methods, etc., using appropriate criteria (end product may not be a distinct right/wrong) | assess, design, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarize | • Compare and discriminate between ideas  
• Assess value of theories/presentations  
• Make choices based on reasoned arguments  
• Verify value of evidence  
• Recognize subjectivity | • All of the above! |