

Extended-Matching (R-Type) Items

Extended Matching items are multiple-choice items organized into sets that use one list of options for all items in the set. A well-constructed Extended-Matching set includes four components:

1. a theme;
2. an option list;
3. a lead-in statement; and
4. at least two item stems, as illustrated below.

Theme: Fatigue

Options:

- | | |
|---|--|
| A. Acute leukemia | H. Hereditary spherocytosis |
| B. Anemia of chronic disease | I. Hypothyroidism |
| C. Congestive heart failure | J. Iron deficiency |
| D. Depression | K. Lyme disease |
| E. Epstein-Barr virus infection | L. Microangiopathic hemolytic anemia |
| F. Folate deficiency | M. Miliary tuberculosis |
| G. Glucose 6-phosphate dehydrogenase deficiency | N. Vitamin B12 (cyanocobalamin) deficiency |

Lead-in: For each patient with fatigue, select the most likely diagnosis.

Stems:

1. A 19-year-old woman has had fatigue, fever, and sore throat for the past week. She has a temperature of 38.3 C (101 F), cervical lymphadenopathy, and splenomegaly. Initial laboratory studies show a leukocyte count of 5000/mm³ (80% lymphocytes, with many lymphocytes exhibiting atypical features). Serum aspartate aminotransferase (AST, GOT) activity is 200 U/L. Serum bilirubin concentration and serum alkaline phosphatase activity are within normal limits.

Ans: E

2. A 15-year-old girl has a two-week history of fatigue and back pain. She has widespread bruising, pallor, and tenderness over the vertebrae and both femurs. Complete blood count shows hemoglobin concentration of 7.0 g/dL, leukocyte count of 2000/mm³, and platelet count of 15,000/mm³.

2. Ans: A

Overview of the Steps for Writing Extended-Matching Items

1. **Identify the theme for the set.** The theme can be a chief complaint (eg, chest pain, fatigue), a disposition situation (eg, admission/discharge from the emergency department), a drug class (eg, antihypertensive agents, antibiotics).
2. **Write the lead-in for the set** (eg, *For each patient described below, select the most likely diagnosis*). The lead-in indicates the relationship between the stems and options, clarifying the question posed for examinees. It is an essential component of an Extended-Matching set.
3. **Prepare the list of options.** The list of options should be single words or very short phrases. List the options in alphabetical order unless there is a logical order.
4. **Write the items.** The items within a set should be similar in structure. Most often, patient vignettes are appropriate.
5. **Review the items.** Check to make sure that there is only a single “best” answer for each question. Also make sure that there are at least four reasonable distractors for each item. As a final check, it is recommended that you ask a colleague to review the items (without the correct answer indicated). If the colleague has difficulty determining the correct answer, modify the option list or the item to eliminate the ambiguity.