Multiple Choice Items

1. Most teachers wait less than a second for a student to respond after asking a question. Research suggests that more appropriate wait-time for thoughtful student response is at least:
    A. 1 second.
    B. 3 seconds.
    C. 10 seconds.
    D. 20 seconds.
    E. 30 seconds.

2. "What are some things you noticed about the way the moon looked in the sky last night?" This question is:
    A. a closed question.
    B. an open-ended question.

3. "When the moon rises in the east as sunset, what is its phase?" This question is:
    A. a closed question.
    B. an open ended question.

For Items 4-6:

For each piece of conversation about batteries and bulbs, identify the type of response given by the teacher in the last line of the dialog.

4. Teacher: What did you do to make the bulb light?
   Student: I put a wire from the battery to here, and I put a wire from the other end of the battery to the bulb.
   Teacher: One wire on the side of the bulb and one wire on the bottom with the wires touching each end of the battery. A complete pathway or circuit is formed.
    A. accepting response
    B. extending response
    C. probing response

5. Teacher: Why did you need to touch the side and the bottom of the bulb to complete the pathway.
   Student: Maybe it has to do with how the bulb is wired inside.
   Teacher: Very good thinking.
    A. accepting response
    B. extending response
    C. probing response

6. Teacher: How do you think the wires are connected on the inside of the bulb?
    A. Accepting response.
    B. Extending response.
    C. Probing response.

7. "What are some plants and animals found in the tide-pool biome?" This question is:
    A. an open-ended question.
    B. a closed question.

8. "What are the possible explanations for the broken egg on the ground?" This question is:
    A. an open-ended question.
    B. a closed question.

9. Which of the following statements describe open-ended questions?
        i. They are likely to promote inquiry.
        ii. They engage large portions of the schema.
        iii. They are likely to promote fact recall.
    A. Both statements i and ii
    B. Statements i, ii, and iii

10. If you want to promote fact recall you should ask:
    A. closed questions.
    B. open-ended questions.
    C. probing questions.
    D. easy questions.
    E. difficult questions.

11. When a teacher waits longer than 3 seconds for responses after asking a question:
    A. the length of student responses increases.
    B. student discipline problems increase.
    C. students offer more thoughtful responses.
    D. A and C.
    E. A, B and C.

12. Which type of response involves seeking clarification and/or justification by asking students to go beyond superficial, first-answer responses?
    A. Accepting
    B. Extending
    C. Probing
    D. All of the above
    E. None of the above

13. Which type of response is a teacher using if he/she nods and repeats what a student said?
    A. Accepting
    B. Extending
    C. Probing
    D. All of the above
    E. None of the above

14. Which type of response is a teacher using if he/she adds to the students ideas?
    A. Accepting
    B. Extending
    C. Probing
    D. All of the above
    E. None of the above

15. Phrasing a question like: "Terry, what happened to the water in the glass when we turned the glass over?"
    A. Encourages the whole class to think.
    B. Eliminates the possibility of wait time.
    C. Assures adequate wait time is used.
    D. Involves many students in the discussion of the topic.

16. Studies of show that when teachers are trained to prolong wait-time, teaching behaviors change in all of the following ways, ***except:***
    A. The number of teacher questions decreased, because more students responded and the student responses became longer.
    B. The number of teacher questions tat called for reflection and clarification increased.
    C. The confidence of teachers in their ability to maintain classroom discipline increased.
    D. Teachers viewed their class as having fewer academically challenged students.
    E. Teachers change te direction of discussion from teacher-dominated to teacher-student discussion.

17. Which of the following is **not** a reason or technique for extending student responses?
    A. Applying student ideas in constructing explanations
    B. Clarifying student ideas
    C. Correcting student ideas
    D. Acknowledging student ideas
    E. Summarizing group progress

18. Which of the following is **not** a reason or technique for probing student responses?
    A. Seeking to clarify student's ideas
    B. Seeking to justify student's ideas
    C. Seeking to verify student's ideas
    D. Seeking to correct students ideas
    E. Asking questions based on student ideas

19. Acceptance of student responses can be expressed by:
    A. acknowledging without evaluating student responses.
    B. repeating or paraphrasing student responses.
    C. reinforcing with praise.
    D. All of the above
    E. None of the above

20. Which of the following statements is **not** an example of an appropriate acknowledging response?
    A. All right.
    B. Nice try, but wrong.
    C. Let's keep your idea in mind
    D. Let's list your idea on the board.
    E. Thanks

Matching Items

Match each question with the type of response it elicits.

Question	**Resulting response**
21. Did each group see the same thing?	A. Extends thinking to different phenomena
22. What do we already know that might help us explain what is going on?	B. Quantitative observations
23. What happened in this investigation?	C. Possible causes of events
24. What surprised you that you would like to learn more about?	D. Looking at data holistically
25. What would happen if used a different size of marble?	E. Comparisons of observations
26. Which choice do you think is the best?	AB. Weighing risks and benefits
27. Who can blow the biggest bubble?	AC. Connecting with scientific knowledge that might be involved in an explanation
28. Why do you think this happened?	AD. Descriptions of events
29. What patterns do you see in the class's data?	AE. Identification of problems
30. How does this relate to our community's problem?	BC. Encourages investigation of Science-Technology-Society issues.