What You Should Know

1.) What is a string in String Theory?

2.) What is a wormhole?

3.) What is the problem with creating a wormhole?

4.) What does relativity say about stretching, warping and ripping the fabric of space?

5.) What do strings do that make it possible to accommodate tears space at the quantum mechanical level?

6.) At its peak, how many competing versions of String Theory did we have?

7.) What did Ed Witten do to solve the problem of abundance?

8.) What fun fact do you know about Ed Witten?

9.) What was Witten's new version called?

10.) With 11 dimensions and, hence, 11 degrees of freedom, people realized there were "objects" that lived in this space that weren't just strings but that looked like what?

12.) What is a brane?

13.) How big can branes be?

14.) What is the multiverse?

15.) Why does the believe that most strings are loose-ended instead of closed looped important?

16.) Is gravity confined to our brane?

17.) According to String Theory, why is gravity so weak (or, why isn't it confined to our brane)? Put a little differently, is a graviton (the force intermediary for gravity) a closed loop or an open-ended loop?

18.) How could we use gravity to communicate with other worlds on other branes?

19.) With 11 dimensions and, hence, 11 degrees of freedom, people realized there were "objects" that lived in this space that weren't just strings but that looked like what?

20.) What is String Theory's explanation for the Big Bang?

21) In this view, are Big Bangs rare?

22.) What's the problem with all of this?

23.) What is at Fermilab?

24.) What clever thing are they doing at Fermilab that involves gravitons and that might prove the idea of extra dimensions?

25.) What is happening at Cern on the border of France and Switzerland?

26.) What is a sparticle? (the product of super symmetry)

27.) In the Standard Model, there was one last particle that scientists had to "find" to complete the model. What was that particle, what is it related to and has it been found?