9 Questions from Fred, plus 2 bonus questions I added:

*1. How would you test your non-tensor theory in the real world?*
*2. Does your theory agree with Einstein's general relativity?*
[note: I always call my work a "proposal" and never a scientific theory.]
Measure weak field gravity to second order Parameterized Post-Newtonian accuracy. More specifically, this is first order accuracy:

$$d\tau^2 = \left(1 - 2\frac{GM}{c^2R} + 2\left(\frac{GM}{c^2R}\right)^2 + O(3)\right)dt^2 \\ - \left(1 + 2\frac{GM}{c^2R} + O(2)\right)(dx^2 + dy^2 + dz^2)/c^2$$

My proposal is precisely the same to this level of accuracy. The differences is at second order PPN accuracy. This is my proposal:

$$d\tau^2 = \left(1 - 2\frac{GM}{c^2R} + 2\left(\frac{GM}{c^2R}\right)^2 - \frac{4}{3}\left(\frac{GM}{c^2R}\right)^3 + O(4)\right)dt^2 \\ - \left(1 + 2\frac{GM}{c^2R} + 2\left(\frac{GM}{c^2R}\right)^2 + O(3)\right)(dx^2 + dy^2 + dz^2)/c^2$$

The -4/3 in my proposal is -3/2 in the Schwarzschild solution, and my +2 (or +4/2) is +5/2 in GR. In my proposal, all the time coefficients are the same as the one for space up to the sign. The effect on bending light is about 12%, or 1 microarcsecond. This is a factor of 100 more sensitive than we can measure today.

*3. Does your theory agree with the standard model in QFT?*
⅔'s yes, ⅓ no. My work suggests why there should be 3 symmetries and what exactly those 3 symmetries are for the standard model. What are they symmetries of the unity in space-time, (1, 0, 0, 0)? A signal in general will have both the unit circle in the complex plane, U(1), and the unit quaternions, SU(2). It will also have the symmetry of $Q_8$, the quaternion group, which is not SU(3).

*4. Is your theory coordinate free or covariant?*
My proposal works with tensors of rank 0 as numbers for events in space-time. There are different ways one can represent a number. Representation theory for numbers is different from coordinate systems with their basis vectors and transformation of said basis vectors, all the machinery of differential geometry including metrics.

*5. Does your theory explain or avoid the discrepancy of roughly 54 to 122 orders of magnitude between the quantum vacuum energy density observed vs. QFT?*
There is a clear deep difference in relativistic quantum field theory. The Klein-Gordon equation looks like it is missing 3 equations:

$$\left(\frac{\hbar}{mc^2}\right)^2\left(\frac{\partial^2}{\partial t^2} - c^2\nabla^2, 2c\frac{\partial}{\partial t}\vec{\nabla}\right)\psi = \left(1, 2\beta\gamma^2\right)\psi$$

The first term is the Klein-Gordon equation used for spin-0 bosons. The three mixed derivative equations are as far as I can tell not used. It is my speculation that these three other equations must also be used to have any chance of understanding relativistic quantum field theory.

*6. Does your theory allow or explain dark energy?*
I call this problem "big gravity", how things are moving at the largest of scales. If we use Newton's law exactly as he wrote it, then we do have data that says we do not understand the motion at the scale of the Universe. My proposal for gravity, space-times-time equivalence classes, has no place to drop in dark energy as is done with the cosmological constant of general relativity. I have a few speculations on the subject, but they are only speculations at this point.

*7. Does your theory allow or explain dark matter?*
I call this problem "weak gravity". For the rotation profile of thin disk galaxies, the gravity is ten orders of magnitude less than on the surface of the Earth. The models for the rotation of a thin disk galaxy is an analytic function (using the difference of a pair of modified Bessel functions, whatever that may mean, eq. 2-165 of "Galactic Dynamics" by Binney and Tremaine). I am particularly interested in repeating the derivation of the rotation profile by including the first order term for gravity on the dR term. Again, I have speculations only.

*8. Does your theory use any actual measurement model with noise at non-zero temperature (e.g., Bayes' rule with a given likelihood)?*
I don't understand the question as asked. My proposal is the imaginary twin of special relativity. As such, however one answers for special relativity would apply.

*9. Is your theory stable in the sense of Penrose?*
There is a new equivalence class for gravity in this proposal, but there are no field equations. An equivalence class is a stable thing.

Two other good questions…
*10. Does your theory have a graviton?*
No. Special relativity with is an equivalence class made on observations by different observers who honestly collect their measurements for the difference between two events and square them. If the observers are moving at a constant speed relativity to each other, then they the first term of the square of the difference will be identical:

$$dp \equiv dp' \Rightarrow Re(dp^2 = dp'^2)$$

If the two observers are in a gravity field, and the two observers are not moving relativity to each other, and they are different distances from the gravitational source, they will be in a different equivalence class:

$$dp \equiv dp' \Rightarrow Im(dp^2 = dp'^2)$$

One can imagine more complicated situations where these two mix.

*11. What about The Big Bang and Inflation?*
Just don't know, but I remain skeptical of any proposal that uses only Newtonian theory for its foundations.