Dark Matter and Dark Energy

We know that the universe is made up of matter -- that's anything that has mass and takes up space. It's also made up of energy, so in short, the universe essentially consists of stuff and movement! But something that puzzles us is the fact that about 80% of the matter in the universe is made up of things we cannot observe, which we call “dark matter”. This mysterious ingredient of the universe does not produce any light or energy, and we can only infer that it exists by its gravitational effect on matter.

But why is it important? Scientists maintain that dark matter may be responsible for the unexplained motion and movement of stars, and the rotation of galaxies. In essence, without dark matter, there may well be no signs of life in our universe at all.

One common misconception about dark matter is that it is the same as “dark energy”, but this is not accurate. While it's true that most of the matter in our universe is made up of dark matter, this actually only accounts for about 25% of the universe’s total composition. Dark energy, on the other hand, makes up around 70% of the universe. But why does this matter? Well, dark energy may be responsible for accelerating the expansion of the universe. You see, whereas gravity pulls things together, dark energy drives them apart. Scientists once believed that the universe, which has been expanding outwards ever since the Big Bang, would eventually slow down and run out of energy after enough time. However, they've since discovered that it is expanding more quickly than ever before -- something which is totally counterintuitive to gravity. It's precisely for this reason that experts believe that dark energy is the driving force of our universe's growth.

Q1 Choose an alternative title for the text.
A Everything You Need to Know about Dark Matter
B The History of the Big Bang
C The Components of Our Universe
D Why Gravity Isn't Enough

Q2 How do we know that dark matter exists?
A By its effect on matter.
B Scientists have measured it.
C Because it's causing the universe to expand.
D Because it makes up 80% of the universe.

Q3 What is true about dark energy?
A It makes up 70% of our universe.
B It's the same as dark matter.
C It pulls things together.
D All of the above.

Q4 What does the text say about the Big Bang?
A It caused the universe to expand outward.
B It is counterintuitive to gravity.
C It is responsible for the unexplained movement of stars.
D It's accelerating the expansion of the universe.
# ANSWERS: Dark Matter and Dark Energy

<table>
<thead>
<tr>
<th>Question</th>
<th>Correct Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>C The Components of Our Universe</td>
</tr>
<tr>
<td>Q2</td>
<td>A By its effect on matter.</td>
</tr>
<tr>
<td>Q3</td>
<td>A It makes up 70% of our universe.</td>
</tr>
<tr>
<td>Q4</td>
<td>A It caused the universe to expand outward.</td>
</tr>
</tbody>
</table>