**Logical Fallacy**

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**Part 1:**

1. Flour is **necessary** for baking a loaf of bread.

Flour is not the only ingredient of bread and you cannot bake bread without flour.

1. Being a woman is a **necessary** condition for becoming a mother.

A mother must be a woman, but a woman may not be a mother.

1. Something being blue is **sufficient** condition for something not to be called black.

If something being blue, it must not be called black. If something not to be called black, it can be red, green.

1. Someone being 13-19 years old is a **necessary and sufficient** condition for calling them a teenager.

The word ‘teenager’ means someone being 13-19, so it’s necessary and sufficient.

1. Having enough petrol in your car is **neither necessary nor sufficient** to start it.

The car may be electrical car which can start without petrol.

1. Eating too much spicy food can be a **sufficient** reason for getting a stomach-ache.

Eating too much spicy food can cause stomach-ache, but eating something expired can also cause stomach-ache.

1. Having the highest grade is **neither necessary nor sufficient** condition for being the cleverest student in the class.

The cleverest student may have some mistakes which leads average grade.

The one who has highest grade may not be the cleverest one, also can be the most hardworking one.

1. Self-identifying as a woman is **neither necessary nor sufficient** condition to be considered a woman.

A man could self-identify as a woman, a woman could self-identify as a man.

**Part 2:**

1. **You are either with us or with the terrorists (George W Bush)**  
   Loaded Language – Bush used word “terrorists” which has an evaluative meaning.
2. **Darwin argued that man is just a monkey, so we shouldn’t take him seriously.**  
   Straw man – The talker misrepresented Darwin’s viewpoint, it means we are just evolved monkeys, don’t be too arrogant.  
   Ad Hominem – The talker attacked on Darwin himself rather than his idea.
3. **She hasn’t had any children. How can she be a good teacher?**  
   Slippery slope – There is no reason believe that a woman who doesn’t have children cannot be a good teacher.
4. **Donald Trump doesn’t believe in global warming. So, there is no reason to worry about it.**  
   From Authority – Donald Trump is not professional at environmental science, it is not an authority figure.
5. **Teacher, please don’t fail me! If I fail, it will break my mother’s heart!**Emotional Appeal – “break my mother’s heart!” is an emotional phrase, the talker is appealing to emotion rather than fact.
6. **Since I started eating McDonald’s for breakfast, I have lost 10 kilograms.**Post hoc ergo Propter hoc – Although talker have been eating McDonald as breakfast for a while before losing of 10 kg, there is no reason showed that eating McDonald led to losing of weight.
7. **My grandfather smoked 100 cigarettes a day and lived to be 100 years old, so smoking must be good for your health.**Post hoc ergo Propter – Although talker’s grandfather smoked 100 cigarettes a day for a long-term before lived to be 100 years old, there is no reason showed that smoking led his longevity.  
   Hasty Generalization – Talker’s grandfather is a specific case, his case cannot show that smoking good for our health.
8. **Since the development of society, China’s conditions have been getting better and better.**  
   Ambiguity Fallacy – “Since the development of society” is a vague phrase, it can cause problem of ambiguity.