Solutions: Conditional Expressions

Problem 1:

```
print('Earthquake Classification')
user_inp = input('Please give the magnitude of the earthquake: ')
value = float(user_inp)
value = round(value,1)
if value <= 2.9:
    print('Class: not felt')
elif value <= 3.9:
    print('Class: minor')
elif value <= 4.9:
    print('Class: light')
elif value <= 5.9:
    print('Class: moderate')
elif value <= 6.9:
    print('Class: strong')
elif value <=7.9:
    print('Class: major')
else:
    print('Class: great')
```

Problem 2:

We need to convert between times expressed in different units. Here, we convert to seconds. Also, we use expressions such as 12*60*60 for 12 hours instead of multiplying out (43200), because this way, we can more easily spot errors.

```
usr_magnitude = float(input('please enter the number: '))
usr_measure = input('please enter the time measure: ')
if usr_measure.startswith('m') or usr_measure.startswith('M'):
    usr_magnitude *= 60
elif usr_measure.startswith('h') or usr_measure.startswith('H'):
    usr_magnitude *= 60*60
if usr_magnitude < 0.1:
    print('Capillary waves')
elif usr_magnitude < 1:
    print('Ultragravity waves')
elif usr_magnitude < 20:
    print('Gravity waves')
elif usr_magnitude < 5*60:
    print('Infragravity waves')
elif usr_magnitude < 12*60*60:
    print('Long-period waves')
elif usr_magnitude <= 24*60*60:
    print('Ordinary tidal waves')
else:
    print('Transtidal waves')
```