

**Mid Examination**  
**Course Title:** Electrical Technology Sessional  
**Time:** 30 minutes

**Course Code:** EEE 212  
**Marks:** 15

1. Which type of motor is used in the pump for an Arduino based project? Describe the working principle of that motor with proper figures. Draw the equivalent circuit of any type of that motor.  
 $1+2+2 = 5$
2. Suppose you are in a spaceship (Zero Gravity). Now you need a motor for showering where you need constant speed of water and you have three phase AC sources and also DC sources. Then, which type of motor you will choose and why? Describe how real and reactive power generation is controlled in that machine. Show the power house diagram of that machine which is sharing load with an infinite bus and explain briefly.
3. Suppose you are a project director of a project in PSTU. You have to use a motor in your project where you have a three phase AC source but no DC source. Then, which type of motor will you choose and why? Draw the equivalent circuit of that motor.  
 $1+1+2+1 = 5$