



Department of Electrical Engineering

Final Term Assignment Summer 2020

Applied Physics

Instructor: Dr. Shahid Latif

Max Marks: 50
September 26th 2020

- Q1: a) What is meant by the term Work done? Derive equations for positive and negative work done. (5 Marks)
- b) An object weighing 32 N is pulled with a force of 45 N with a rope which is making an angle of 45 degrees with the direction of motion of the object. The object moves 50 meters along the ground, calculate the work done in pulling the object? (5 Marks)
- Q2 a) State and mathematically explain Coulomb's law. Apply Coulomb's law to discuss role of the material medium in between the charges. (5 Marks)
- b) Explain using diagrams and mathematical expressions concept of electric flux. (5 Marks)
- Q3) a) Describe the existence of magnetic force on electric current carrying conductor in a magnetic field. Obtain equation for the force. (5 Marks)
- b) What is the force per meter length on a wire carrying 1.2 A current in a 0.75 T magnetic field? (5 Marks)
- Q4) a) Give electrical classification of solids, give three examples for each type of material. (5 marks)
- b) Distinguish between intrinsic and extrinsic semiconductors. Give example of each material used for these purposes. (5 marks)
- Q5) What is photoelectric effect? How it is experimentally studied? What are the major features of photoelectric effect, describe by giving examples? (10 marks)
