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| Department of Electrical Engineering  Assignment  Date: 14/04/2020  Course Details | | | |
| Course Title: | Applied Chemistry | Module: | 2nd |
| Instructor: |  | Total Marks: | 30 |
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Student Details

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| Name: |  | Student ID: |  |

Part A (Objective Type) 10 Marks

1. The bio methane is produced by the \_\_\_\_\_\_\_\_\_\_ of biomass.  
   a) Aerobic oxidation  
   b) Anaerobic oxidation  
   c) Fermentation  
   d) Rectification
2. 2. Bio gas is compressed and used as \_\_\_\_\_\_\_\_  
   a) Motor fuel  
   b) Fuels in vehicles  
   c) Dog feed  
   d) Cow feed
3. The \_\_\_\_\_\_\_ is used as the agricultural fertilizer.  
   a) Bio ethanol  
   b) Bio ethane  
   c) Bio methanol  
   d) Digestrate
4. Bio diesel is produced by the \_\_\_\_\_\_\_\_\_\_ of the vegetable oil.  
   a) Fermentation  
   b) Distillation  
   c) Trans esterification  
   d) Rectification
5. Fuels cell is an electrochemical device that converts the chemical energy into the \_\_\_\_\_\_\_\_\_\_\_  
   a) Electrical energy  
   b) Mechanical energy  
   c) Static energy  
   d) Frictional energy
6. From cathode \_\_\_\_\_\_\_\_\_\_\_ gas is bubbled in hydrogen-oxygen cell.  
   a) Hydrogen  
   b) Oxygen  
   c) Nitrogen  
   d) Chlorine
7. A module in a solar panel refers to   
     
   a. Series arrangement of solar cells.  
   b. Parallel arrangement of solar cells.  
   c. Series and parallel arrangement of solar cells.  
   d. None of the above.
8. The efficiency of the solar cell is about  
   a. 25 %  
   b. 15 %  
   c. 40 %  
   d. 60 %
9. The current density of a photo voltaic cell ranges from  
     
   a. 10 – 20 mA/cm2  
   b. 40 – 50 mA/cm2  
   c. 20 – 40 mA/cm2  
   d. 60 – 100 mA/cm2
10. Solar energy is radiated by clouds and earth as
11. long wave energy
12. short wave energy
13. medial wave energy
14. extreme wave energy

Part B (Subjective Type) 20 marks

Q. 2 a. Driving Force in converting Solar Energy into Electrical Energy is considered important Discuss. (5)

Q 2 b. Differentiate between N-type and P-type. (5)

Q.3 a. Role of depletion region in semi-conductor material. (5)

b. Solar panel you will suggest to use in Peshawar Area Mono or poly? Provide your answer with example and proof.