## Department of Electrical Engineering Assignment

### Date: 20/04/2020

		Course D	<u>etails</u>	
	rse Title: Power Generations: ENGR. Sajid		Module: Total Marks:	2nd 30
Student Details				
Nam	ne: Hasnain M	ıavia	Student ID:	15831
Q1	Pakistan uses different types of energy sources to overcome the energy crisis (12 mark			isis (12 marks)
•	briefly explain those sources and also explain either they are able to meet the			
	demand of consumers			
Q2	The energy sources is categorized in conventional and non-conventional sources. (08 marks			
	Which type of sources is mostly utilized in Pakistan?			
Q3	Hydro Power and Solar power is widely used in Pakistan. Which energy source (10			rce (10 marks)
	you will prefer write proper arguments either you prefer Hydro Power or Solar			
	Power.			

# Q1- Pakistan uses different types of energy sources to overcome the energy crisis briefly explain those sources and also explain either they are able to meet the demand of consumers

ID # 15831

#### <u>ANS</u>

#### NON RENWEABLE ENERGY SORCE

Today in Pakistan there are many types of energy source are developed and used for the purpose of energy generation. That is consist of fossil fuels like (Coal, gas and oil) etc.

#### **COAL**

In this case. It has a mechanism in which we burn the coal, the coal produce steam, this steam has some pressure which is use to run its turbine then this turbine produce energy and energy converted into electricity.

#### <u>GAS</u>

A type of nonrenewable energy source which is used like steam or thermal energy source.

#### <u>OIL</u>

In this type of energy source Petrol, diesel etc. are used petrol is used in generators to generate electricity the generator convert mechanical source in electrical source.

#### RENWEABLE ENERGY SORCE

(Hydropower, wind, solar, etc.)

#### <u>HUDROPOWER</u>

In this type of energy generation we get those area or those places at which the water is located at height and the turbine will be installed at a ground level. When water is dropped from a huge height through a tunnel and hits the turbine wings this wings will rotate and turbine will run. Then it will produce electricity.

#### **WIND ENERGY SOURCE**

In this type of energy generation we install this system on ground area and on a huge height to get better air pressure. Gretter pressure will rotate the wings of this turbine which generate energy

#### **SOLAR**

A newer technology in Pakistan and highly use in less time which is renewable source. In this case the sunlight is hits the solar panel this panel absorb this light and convert it into energy.

It is called photon cell. These panel are install every place like roof of homes walls etc.

### Q2-The energy sources is categorized in conventional and nonconventional sources. Which type of sources is mostly utilized in Pakistan?

#### <u>ANS</u>

In Pakistan we use mostly non-conventional energy source and also utilized. In this source of energy we have more energy generation system

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# Q3-Hydro Power and Solar power is widely used in Pakistan. Which energy source you will prefer write proper arguments either you prefer Hydro Power or Solar Power.

#### <u>Ans</u>

I prefer Hydro Power generation

- 1. It is a renewable source of energy produced from running water without reducing quality and quantity. Therefore, all hydroelectric developments, of small or large size, whether run of the river or of accumulated storage, fit the concept of renewable
- 2. This source promoted guaranteed energy and price stability. It is the only large renewable source of electricity and its cost-benefit ratio, efficiency, flexibility and reliability assist in optimizing the use of thermal power plants.
- 3. It contributes to the storage of drinking water. It means this water is suitable for drinking
- 4. This energy source improve the air. That air we breathe. Hydroelectric power plants don't release pollutants into the air. They very frequently substitute the generation from fossil fuels, thus reducing acid rain and smog. In addition to this, hydroelectric developments don't generate toxic by-products.