

IQRA National University, Peshawar Department of Electrical Engineering Spring20 Power Generation

Assignment 1

Name: Irshad Khan

REG.No: 12403

Question No 1 (CLO -1)

20

- A. A 100kVA distribution transformer costs Rs 2,00,000 and has an estimated useful life of 20 years. Find the annual depreciation amount, assuming that the scrap value of the transformer to be Rs 10,000.
- B. The average demand of a consumer is 40 A at 230 volts at unity power factor His total energy consumption annually is 10,000 KWh. If the unit rate is Rs 2 per kWh for the first 500hours use of the demand per annum plus Re 1 for each additional units, Calculate the annual bill of the consumer and equivalent flat rate.

Question No 2 (CLO-2)

10

A. A power station has to supply load as follows:

Timings	KW
11 pm to 5 am	500
5 am to 6 am	750
6 am to 7 am	1000
7 am to 9 am	2000
9 am to 12 noon	2500
12 Noon to 1 pm	1500
1 pm to 5 pm	2500
5 pm to 7 pm	2000
7 pm to 9 pm	2500
9 pm to 11 pm	1000

For the given data above draw the load curve. Select the number and size of generator units to supply this load. Find the reserve capacity of the plant required. Calculate the plant capacity factor. Determine the operating schedule of the units in the station. Calculate the plant factor?

Page No#01 Name => Irshad Khan Engr Sanaullah ID => 12403. subject => Power Generation A lookva distribution transformer cost Rs. 200000 and has an estimated useful life of 20 years. Find the annual depreciation amount assuming that the scrap value of the transformer to be Rs 10,000. Given P= 200000 5= 10000 N= 20 Years. Depreciation D= (P-S) 200000-10000 9500 annually The average demand of a consumer is 40A at 230 volts at unity power factor his total energy consumption annually 15 10000 KWh - If the unit rate is Rs 2 per KWh for the first 500 hours use of the domand per annum plus Rs 1 for each additional units

Page No # 02

	Name Irshad Khan ID 12403	
	Calculate the annual bill of the	
-	consumer and equivalent plat rate.	. (
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-	Voltage = v 230 volts.	n construir de la construir de
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	= 9.2 KW	
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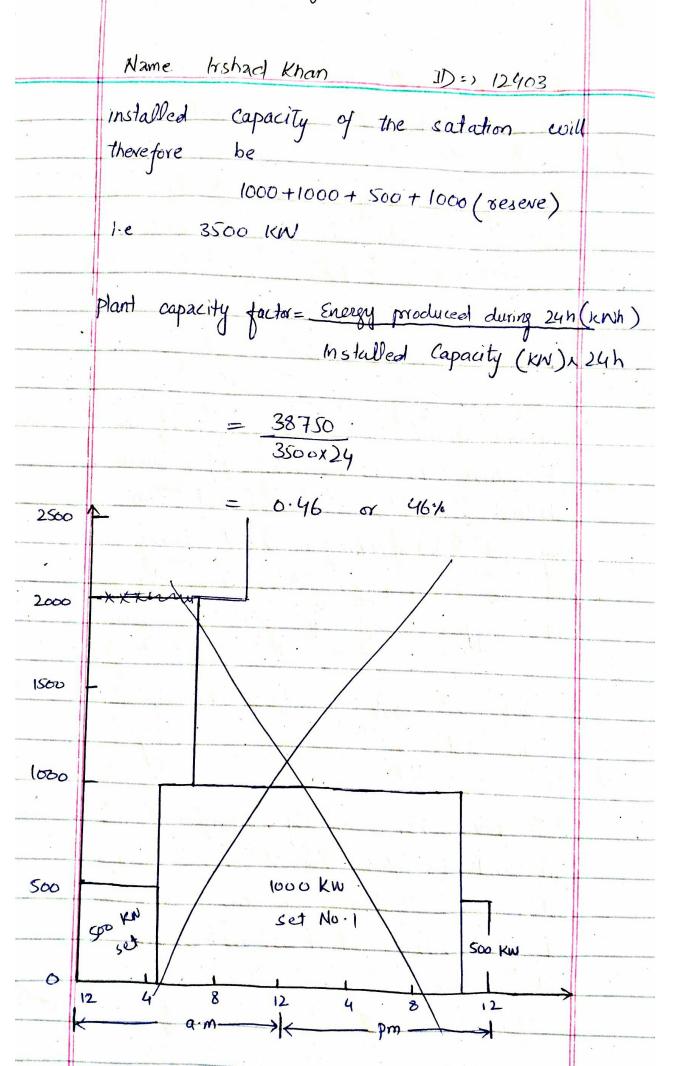
Page No #03

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	7 am to 9 am 2000	
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Page No#04

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	9 p	m to 11	pm	1000	
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*	required.	Calculate.	the plant	capacity	
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