English Medium

DEPUTY CITY ENGINEER / ASSISTANT CITY ENGINEER
Electrical Syllabus

Basic Electrical	**5**
Power factor	
Electricity duty	
FPPA Charges	
TOU charges	
Demand management (DSM)	
Electricity act 2003	
Tariff types	
Consumer categories	
Harmonics	
Voltage ragulations	
Transformers	**5**
Classification	
Types (Step up/ Step down)	
Applications	
Cooling methods (Air cooled/ Oil cooled)	
Protection system	
Type tests	
Efficiency with respect to loading	
Applicable IS standards	
Electrical Motors	**5**
Type	
Type tests	
Efficient motors,	
% slip	
Type of Losses	
Insulation class	
Synchronous speed	
Applicable IS standards	
Streetlights and Illumination	**25**
Type of Lamps	
CRI	
LM 79/80	
How to measure Lux (Nine-point method),	
Class of Road as per NLC	
Uniformity	
Efficacy	
Type of Luminaries	
Saving in Streetlight	
LED control Methods	
Type of Exterior lighting application	

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Renewable Energy	**20**
Definition Examples of RE Advantages TCo2 calculation S&F regulation **Solar-** Solar power policy Banking charges Capacity restrictions APPC rate for sale of electricity Net / Gross metering CUF Type of modules Wattages Islanding of inverter Remote monitoring system Strcture material and strength requirment MPPT **Wind -** Wind power policy CUF Capacity Types of WTG Speed of wind required for WTG NIWE Prototype ROW WTG to Substation transmission line Power equation UTM Yawing **Hydrogen Energy -** Hydrogen production methods Types Storage Transportation Safety Explosion limits	

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MECHANICAL SYLLABUS

Pumps	**10**
Function	
Classification of Pumps	
Pumps Characteristics	
Applications	
Head	
Flow	
Components	
Measurement of Efficiency	
Affinity Law	
NPSH	
HVAC	**5**
Fundamentals and scope of HVAC	
Function	
Classification of Air-Conditioning System	
Mode of Heat Transfer	
Efficiency (COP)	
Types of Air conditioning	
Type of Refrigerant	
VAM	
STP & SPS	**10**
Type	
STP Process	
Function	
Capacity (MLD)	
COD	
BOD	
TSS	
PH	
SPS Operation	
Sludge Treatment and Disposal	
WTP and WDS	**10**
Types	
Function	
Capacity (MLD)	
Turbidity	
ESR	
Aeration	
Sedimenation	
Disinfection Methods	
NET ZERO AND CLIMATE RESILLIANCE	**5**
India RE status	
Ahmedabad city action plan	
City's Target for net zero	
Sectors to select	
Mitingation options & Adaptation options	
Total	**100**