Unit ①

SGT

1) The smart grid *

Introduction
→ why implement the smart grid now
→ what is the smart grid
Q5 → overview of how indian power market is organized
4 Q → Operated & challenges being faced.
→ overview of the technologies required for
the smart grid.

1) Define SGT & Explain it's necessity

2) why implement the SG Now

3) what is SGT ? Overview of How indian power Q2
market in organized operated & challenges being faced

4) difference. ✓ ✓ ✓ Q1

5) Explain Technology required for th SG ← Q11
  characteristics & features ✓✓   4   same
6) different benefit ✓ ✓✓   Qr
7) function of SG component
   compared   ✓ Q6

5×6

5×5 = ②

①④

5/8
4, 5, 6, 7, 8

unit ①
SGT

$) The smart grid*

- Introduction
- why implement the smart grid now
- What is the Smart grid
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- Operated & challenges being faced.
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Qs

9 Q

1) Define SGT & Explain it's necessity

2) why implement the SG Now

Ⓐ 3) what is SGT ! overview of How indian power Q2
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Ⓑ 4) diffuence. ✓ N ✓ ①1

Ⓒ 5) Explain Technology required for tn GG ← Q11
   s) charateris & features ✓ 4   } same
   6) diffeent benifit ✓ ✓ ✓ Or
   7) function of SG component
       1om?9   N ✓ Q6

SY 6

SYS = ②

1 0 ✓

4,5,6,7,8

unit ②
SGT
Smart grid Technologies

Q = smart meter :-
— An overview of the hardware used,
— Evolution of electricity metering.
— key components of smart metering.
— Automatic meter reading (AMR), Demad side
integration
— Substation atomation equipment.
— switching techonolgy
— communication channels
— Isu1 OSI model.
— communication Tech.
— GIS
— IED & their app° for monitoring & protection
— smart storge like Battery.
— PMU.

Q   Explain inteligent electic ouvice (IED) & their app°
for monitoring & protection of SG   N   Q 10

Q comparison b/n smt metriy & connekson metriy Q13

Q Explain smart metw app & App°

Q

Q   AMR   Qg   IED
@   PWU   AMR
        SP   PWU

Power Quality Issues in smart grid

1. Power Quality & EMC in smart grid
2. Power Quality issues of Grid connected Renewable Energy sources
3. Power Quality conditions for smart grid
4. Web based power Quality monitor.
5. Power Quality Audit

1) What is role of EMC in SG ✓

2) Explain power Quality audit in detail Also specify its App?

3) How smart grid help to improve power quality ✓

4) Comparison bet? vtg quality & EMC

5) Power quality issues ✓

unit (5)
SGT.
power-electros in tmrmt grid.

- Introduction
- Curnt Sorve connvts
- Voltage surve connon
- Renewable energy genertin
- fault cunt limiting
- Shunt compensation
- D-statcom ; fins.

Ⓐ

- Role
1 Explain role & significance of power elemg
   in SG.

Q2 What is the app" of power elemcs tech in SG.

Q3 Explain CSC in SG @ AK ✓

Q4 Explain VSC in SG @ AK ✓

Q5 comp.n's ben CS & vc connti

Q6 write note on Renewable energy genertiu &
   advantye the SG.   @ AK 16

Q7

Q8 what is fult curnt limiting in SG @ 25 AK
                                          - Shunt ind
                                          D-statim
Q9 D-STAT.com @ Explain fults in SG.   load comi
      29 AK   18   - Sensims

Unit 6
SG 7.

Distribution management system.
(DMS)

- Introduction
1 - Data Store & associated external system
2 - modelling & analysis tools
3 - energy mangmet system
4 - visualization technique

Q1) Explain the distribution mangmet system
in SG

Q2) what data store & associated external system

Q3) Explain the modeling & analysis tool in
distribution mangmt system.

Q4 Explain energy mangmt system in SG

Q5) App. EMS

Q6 Explain visulization technique in SG.