

R09

Code: 9A02702

B.Tech IV Year I Semester (R09) Supplementary Examinations, May 2013

FUNDAMENTAL OF HVDC & FACTS DEVICES

(Electrical and Electronics Engineering)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions
All questions carry equal marks

1. (a) With neat sketches explain the different kinds of D.C links available.
(b) What are the demerits of HVDC power transmission?
2. (a) Discuss about pulse frequency control scheme.
(b) With the help of a block diagram explain the hierarchical control structure for a D.C link.
3. (a) What are the various types of filters that are employed in HVDC converter station? Discuss them in detail.
(b) What are the adverse affects of harmonics produced by the HVDC converters?
4. (a) Explain the sequential method for AC-DC power flow.
(b) Draw the flow chart for AC/DC load flow.
5. (a) Explain power flow in parallel paths.
(b) What are the basic types of FACTS controllers explain each?
6. (a) What are objectives of shunt compensation? Explain.
(b) Explain TCR and TSR
7. Explain the following:
(a) TCSC (b) SSSC
8. (a) Explain operating principle of UPFC.
(b) Explain control structure of UPFC.
