

Code No: D5604

R09

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M.Tech II - Semester Examinations, March/April 2011

POWER SYSTEM PROTECTION WITH STATIC RELAYS
(POWER SYSTEMS HIGH VOLTAGE)

Time: 3hours

Max. Marks: 60

Answer any five questions
All questions carry equal marks

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1. (a) Explain the classification of relays based on technology. [12]
(b) Write advantages and disadvantages of relays. [12]
2. Derive generalized mathematical equation for amplitude and phase comparison. [12]
3. (a) With the help of circuit diagram explain the principle of operation of opposed voltage type amplitude comparator. [12]
(b) Explain block spike type phase comparator. [12]
4. With neat circuit diagram explain the operation of static definite time over current Relay. [12]
5. (a) Explain time graded system of protection. [12]
(b) Explain over current protection of radial feeder. [12]
6. With the help of threshold characteristics and power swing locus on R-X diagram describe the effect of power swing on the performance of directional impedance, directional reactance and mho relays. [12]
7. What are the different conic characteristics and how it can be obtained using three input amplitude comparators. [12]
8. Discuss in detail the differential protection of three phase generator. [12]
