



- 7 a) Derive the expression for the maximum power transfer from the steady state power. [8M]
- b) A 4 pole, 50 Hz, 60 MVA turbo generator has a moment of inertia of  $9 \times 10^3 \text{ kg-m}^2$ . Find [8M]  
the kinetic energy in MJ at rated speed, the inertia constant M and H, the acceleration in degrees per sec<sup>2</sup> and in rpm/sec. If the input power is 20 MW and the output power is 14 MW.

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