

UNIT-V:DIRECTENERGYCONVERTIONS

S.No	Questions	BT	CO	PO
Part–A(Short Answer Questions)				
1	What is direct energy conversion?	L1	CO5	1,2,3,4,6,7
2	Define fuel cell.	L1	CO5	1,2,3,4,6,7
3	What is the principle of direct energy conversion?	L1	CO5	1,2,3,4,6,7
4	Name any two direct energy conversion systems.	L2	CO5	1,2,3,4,6,7
5	What is a thermo electric generator?	L1	CO5	1,2,3,4,6,7
6	Define photovoltaic effect.	L1	CO5	1,2,3,4,6,7
7	What is a solar cell?	L1	CO5	1,2,3,4,6,7
8	What is the function of an electrolyte in a fuel cell?	L1	CO5	1,2,3,4,6,7
9	Mention any two advantages of direct energy conversion systems.	L1	CO5	1,2,3,4,6,7
10	List any two applications of direct energy conversion technologies.	L1	CO5	1,2,3,4,6,7
Part –B(Long Answer Questions)				

1	Explain the need for Direct Energy Conversion(DEC)and discuss the limitations of the Carnot cycle.	L3	CO5	1,2,3,4,6,7
2	Describe the working principle of thermo-electric generators and explain Seebeck, Peltier, and Joule–Thomson effects	L3	CO5	1,2,3,4,6,7
3	Explain the construction and working of MHD generators with Principles of dissociation, ionization, Hall effect, and magnetic flux.	L3	CO5	1,2,3,4,6,7
4	Discuss MHD accelerator, MHD engine, and electron gas dynamic conversion with suitable applications and economic aspects	L3	CO5	1,2,3,4,6,7
5	Explain the principle and working of fuel cells. Discuss Faraday's laws, thermodynamic aspects, selection of fuels, and operating conditions.	L4	CO5	1,2,3,4,6,7

