

<b>Name:</b> <b>Enrolment No:</b>	
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**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**

**End Semester Examination, May 2025**

**Course: Sustainability & Climate Change**

**Program: MBA PM**

**Course Code: PIPM8018**

**Instructions:**

**Semester: IV**

**Time : 03 hrs.**

**Max. Marks: 100**

**SECTION A**  
**10Qx2M=20Marks**

S. No.		Marks	CO
Q 1	Complete the Abbreviations a. UNFCCC b. COP c. NAPCC d. NDC	2	CO1
Q2.	What is target for CO2 and other emission by India in 2030 as per NDC?	2	CO1
Q3	What is Panchamitra? Explain.	2	CO1
Q4	Name five focus area of development in Energy Sector in India.	2	CO1
Q5	What is the full form of IAEA and IEA?	2	CO1
Q6	UNFCC was formed in -----.	2	CO1
Q7	How much is Installed Renewable Energy Generation capacity in India at present? What is target for 2030 for Non-Fossil Fuel?	2	CO1
Q8	Name 4 countries dominated by Wind Energy.	2	CO1
Q9	What is sustainability? Explain.	2	CO1
Q10	Which are five major sources of Energy globally?	2	CO1

**SECTION B**  
**4Qx5M= 20 Marks**

Q 11	What is Climate Change and Global Warming? Explain facts behind these and its effects.	5	CO2
Q 12	Explain Sustainable Energy. How you will select fuel taking care of Economy, Environment and overall Sustainability?	5	CO2

Q 13	Differentiate between Fossil Energy and Non Fossil Energy with two examples each.	5	CO2
Q 14	Differentiate between Commercial Energy and Non-Commercial Energy with global examples.	5	CO2

**SECTION-C**  
**3Qx10M=30 Marks**

Q 15	Explain the Paris Agreement and discuss the key objectives it aims to achieve. What are the major steps taken by the Indian government to fulfill its commitments under the Paris Agreement?	10	CO3
Q 16	“World is under Energy Transition which is going to affect global Energy Sector and Transportation in drastically manner” – Critically evaluate this statement.	10	CO3
Q 17	With India's increasing energy demand, discuss how the country is balancing energy security while transitioning towards renewable energy. Highlight key initiatives, and challenges in achieving this balance.	10	CO3

**SECTION-D**  
**2Qx15M= 30 Marks**

	<p>Short-term interventions addressing the current energy crisis must be accompanied by a steadfast focus on mid- and long-term goals of the energy transition. High fossil fuel prices, energy security concerns and the urgency of climate change underscore the pressing need to move faster to a clean energy system, says <a href="#">World Energy Transitions Outlook 2022</a>.</p> <p>Launched by the International Renewable Energy Agency (IRENA) at the Berlin Energy Transition Dialogue today, the Agency’s Outlook sets out priority areas and actions based on available technologies that must be realized by 2030 to achieve net zero emissions by mid-century. It also takes stock of progress across all energy uses to date, clearly showing the inadequate pace and scale of the renewables-based transition.</p> <p>“The energy transition is far from being on track and anything short of radical action in the coming years will diminish, even eliminate chances to meet our climate goals”, said Francesco La Camera, Director-General of IRENA. “Today, governments are facing multiple challenges of energy security, economic recovery and the affordability of energy bills for households and businesses. Many answers lie in the accelerated transition. But it’s a political choice to put policies in place that comply with Paris Agreement and the Sustainable Development Agenda. Investing in new</p>		
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	<p>fossil fuel infrastructure will only lock-in uneconomic practices, perpetuate existing risks and increase the threats of climate change.”</p> <p>“It is high time to act”, La Camera added. “Recent developments have clearly demonstrated that high fossil fuel prices can result in energy poverty and loss of industrial competitiveness. 80% of the global population lives in countries that are net-importers of fossil fuels. By contrast, renewables are available in all countries, offering a way out of import dependency and allowing countries to decouple economies from the costs of fossil fuels while driving economic growth and new jobs.”</p> <p>The Outlook sees investment needs of USD 5.7 trillion per year until 2030 including the imperative to redirect USD 0.7 trillion annually away from fossil fuels to avoid stranded assets. But investing in the transition would bring concrete socioeconomic and welfare benefits, adding 85 million jobs worldwide in renewables and other transition-related technologies between today and 2030. These job gains would largely surpass losses of 12 million jobs in fossil fuel industries. Overall, more countries would experience greater benefits on the energy transition path than under business as usual, according to the Outlook.</p> <p>Renewables would have to scale-up massively across all sectors from 14% of total energy today to around 40% in 2030. Global annual additions of renewable power would triple by 2030 as recommended by the Intergovernmental Panel on Climate Change (IPCC). At the same time, coal power would have to resolutely be replaced, fossil fuel assets phased out and infrastructure upgraded.</p> <p>The Outlook sees electrification and efficiency as key drivers of the energy transition, enabled by renewables, hydrogen, and sustainable biomass. End-use decarbonization will take center-stage with many solutions available through electrification, green hydrogen, and the direct use of renewables. Notably electro mobility is seen as driver of energy transition progress, growing the sales of electric vehicles (EV) to a global EV fleet twenty times bigger than today.</p> <p>However, a comprehensive set of cross-cutting, structural policies covering all technological avenues and just transition objectives is needed to achieve the necessary deployment levels by 2030. Increasing ambition in the National Determined Contributions (NDCs) and national energy plans</p>		
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	<p>under the Glasgow Climate Pact must provide certainty and guide investment strategies in line with 1.5°C.</p> <p>Particularly the world's largest energy consumers and carbon emitters from the G20 and G7 must show leadership and implement ambitious plans and investments domestically and abroad. They would need to support the global supply of 65% renewables in power generation by 2030. Climate finance, knowledge transfer and assistance would have to increase for an inclusive and equal world.</p> <p>Finally, enabling a rapid transition that complies with climate and development goals requires political commitment to support the highest level of international cooperation. Achieving Sustainable Development Goals and universal access to modern energy by 2030 must remain a vital pillar of a just and inclusive energy transition. A holistic global policy framework can bring countries together to enable international flow of finance, capacity and technologies.</p> <p>If it has evidence that there are more fundamental problems for consumers that might be related to the structure of the electricity market then it can take these up with the regulator, Ofgem or with the Office of Fair Trading. Energy-watch's most recent major case which Ofgem investigated was a general claim, although based on detailed and specific evidence, that domestic customers were being provided with an inadequate billing service by retail electricity companies, with large numbers of customers reporting incorrect bills and problems in resolving disputes with their electricity company. Although Ofgem did not find that this was a fundamental issue relating to market structure or organization it did make a number of recommendations about how companies should deal with the issue including the writing off of bills that are more than a year old, the setting up of an ombudsman to deal with billing complaints and a call for companies to review their contracts to make sure they are fair. Ofgem said these recommendations would be imposed on companies if they did not voluntarily reform their billing practices.</p>		
Q18	Analyze the challenges in getting investment for any projects of Energy transition, Sustainability and climate projects.	15	CO4
Q19	Elaborate the steps any Government can take in promoting Energy Transition, Sustainability and climate projects.	15	CO4