Name: **Enrolment No:**	UPES UNIVERSITY OF TOMORROW

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2022

Course: Energy Sector Structure and Functioning — **Semester: II**
Program: BBA OG — **Time : 03 hrs.**
Course Code: OGOG1001 — **Max. Marks: 100**
Instructions:

SECTION A
10Qx2M=20Marks

S. No.		Marks	CO
Q 1	Complete the Abbreviations a. CUF b. DGH c. OIDB d. PGCIL	**2**	**CO1**
Q2.	Give 2 examples of Primary Energy resources.	**2**	**CO1**
Q3	Name any 2 statistical tools used for energy demand forecasting	**2**	**CO1**
Q4	Name 2 financial parameters used for Energy Pricing	**2**	**CO1**
Q5	What is the role of BEE in Indian energy sector?	**2**	**CO1**
Q6	Name any 2 parameters that are considered for Solar energy technical feasibility study.	**2**	**CO1**
Q7	How much amount of primary energy resources India import from Russia?	**2**	**CO1**
Q8	Name any 2 CGD companies involved in India's CGD business.	**2**	**CO1**
Q9	1 barrel is equal to how many liters?	**2**	**CO1**
Q10	How much energy India consumed in 2020-21 in terms of MTOE?	**2**	**CO1**

SECTION B
4Qx5M= 20 Marks

Q 11	What is the role of OIDB in Oil and Gas sector in India?	**5**	**CO2**
Q 12	What are the characteristics of a good regulator?	**5**	**CO2**
Q 13	Explain the difference between Horizontal integration and Vertical integration.	**5**	**CO2**

Q 14	Name any 5 factors on which energy demand forecasting is done.	**5**	**CO2**
	SECTION-C **3Qx10M=30 Marks**		
Q 15	How Geopolitics and International agreements effects the policy and regulation framework of a country. Explain with a suitable example	**10**	**CO3**
Q 16	Critically explain alternative sources of energy and its impact in Indian energy market?	**10**	**CO3**
Q 17	Compare the role of CERC and SERC in Indian power Sector.	**10**	**CO3**
	SECTION-D **2Qx15M= 30 Marks**		
	Go through the below case study. Questions are given after the case: **Shell case puts spotlight on energy groups' role in climate change** It is five years since the Netherlands lost a court action forcing it to cut its greenhouse gas emissions. It was the first time a government had been compelled by law to take action on climate change and was upheld by an appeals court in 2019, meaning that Dutch authorities have to reduce emissions by 25 per cent compared with 1990 levels. The case, brought by climate group Urgenda, argued that the state's lack of action was putting Dutch citizens in danger. And the court agreed. Now the lawyer behind that 2015 case — Roger Cox — has a new target, Royal Dutch Shell, in a legal fight in The Hague that some believe could force oil and gas companies to accelerate a shift away from fossil fuels and push other corporate polluters to reassess their carbon footprint. In an opening statement in December, Mr. Cox, acting on behalf of a group of activists including Milieudefensie, the Dutch wing of Friends of the Earth, said the Anglo-Dutch group's business model and corporate strategy "is on a collision course with global climate targets" and presented "a great danger for humanity". The activists want Shell — valued at close to £113bn — to cut its total carbon dioxide emissions by 45 per cent by 2030, compared with 2019 levels, ultimately stopping short of an initial push to get the company to eliminate them entirely by 2050. It would force the energy group to completely overhaul its operations and corporate strategy. Mr Cox says the environmental		

	campaigners "asked me if an Urgenda-style case could be brought against a fossil fuel company [and it] made me think that we had a realistic chance of winning a case against an oil major." Litigation against fossil fuel companies is not new. But until now the focus has largely been on liability suits, asking corporations to pay damages for past behaviour. Attention is now shifting to so-called human rights-based cases which have the potential to redraw the future business models and plans of corporate polluters. These cases are designed to advance climate policies, say their backers, raise public awareness and drive behavioural shifts by entire industries. "The need to explore avenues to reduce emissions is much more important than discussions about compensation," says Jaap Spier, author of Climate Obligations of Enterprises, which sets out the obligations of the corporate sector and the liability risks posed by climate change. The Shell case, he says, is helping to shift the debate from, "'OK there is a problem and we need to do something,' to 'what needs to be done by whom and by when'". Lawyers, environmentalists and energy analysts say if Shell loses, it and some of its rivals, might preemptively adopt policies — from divestments to ramping up investment in clean energy — to avoid further legal action. They would be forced to prepare for climate litigation failure as a financial risk. It is also likely, they say, that future legal cases will target not just fossil fuel companies, but also investors and related entities, such as banks extending finance to them. Shell has already said it will reduce the carbon intensity of the energy products it sells by around a third by 2035. It also seeks to be a "net zero" emissions company by 2050 by investing more in cleaner fuels. But climate activists say these targets — which do not include absolute emissions — amount to a tinkering around the edges. The oil company can still continue to expand its fossil fuel businesses while meeting its "net zero" emissions goal.		

	Such legal actions are opening up a new front in the fight over responsibility for climate change. Over the past three years a growing number of cases in the US — filed by cities, states and counties — have sought damages from energy companies for a litany of climate-related problems. They are based on a simple scenario. If the burning of fossil fuels creates emissions that cause climate change, then polluters should compensate public authorities for having to upgrade sea walls or retrofit storm drains to mitigate against the effects. The template for these actions is the successful litigation brought over decades against tobacco companies. This ended with a 1998 settlement guaranteeing $206bn in payments to 46 US states, over a period of 25 years, to cover costs of healthcare payouts and other related claims. The action against Shell is viewed by legal experts as particularly significant because of a series of factors: the Urgenda case provides a precedent, the Netherlands has its own duty of care obligations for corporations as part of the Dutch Civil Code and Shell is based in the country. A separate case in France, against Total, is also seeking to force the energy major to overhaul its corporate strategy to ensure operations align with the targets set out in the Paris Climate Accord. But in this instance there is no legal precedent. A case in Ireland — similar to that brought by Urgenda — argued that the government’s mitigation plan was not ambitious enough. The supreme court in Dublin agreed. European oil majors have come under increasing pressure from environmentalists and investors in recent years to be more accountable for their contribution to climate change. This has forced them to take preliminary action — from investing in low carbon technologies and greener energies to announcing net-zero emissions goals. But the rising scrutiny over their operations has coincided with a pandemic that has shredded their finances, threatening their ability to make good on lofty ambitions.		

Shell has repeatedly said that action to fight climate change is necessary. But argues that, given the global nature of the problem, a battle in the courts will do little to overhaul the energy system. It also points out that even as it supports international efforts, the Paris Agreement obligates governments, not individual corporations, to act. In court the company argued consumers such as motorists are just as responsible for the choices they make and producers should not be penalised disproportionately. The company has invested in biofuels, hydrogen, wind power, electric vehicle charging and smart energy storage solutions and plans to increase investment in low carbon technologies as part of its broader net zero emissions goal. Prior to the pandemic, Shell planned to spend up to 10 per cent of its $30bn in annual capital expenditure on cleaner energy businesses until 2025. That fell to $20bn last year because of the coronavirus pandemic. The company is expected to issue a strategy update in February, but it is likely that spending on low carbon initiatives will remain a fraction of what is spent on its traditional fossil fuel businesses. “We agree with Milieudefensie that action is needed now on climate change,” says Shell. “What will accelerate the energy transition is effective policy, investment in technology and changing customer behaviour, none of which will be achieved with this court action.”

Activism against energy companies has already gone far beyond green campaigners scaling oil rigs and blockading corporate headquarters. Environmentalists are now targeting the oil industry’s lobbying tactics and challenging their corporate advertising. Client Earth, an environmental charity, filed a 2019 legal complaint against oil company BP claiming it was misleading consumers about its focus on low carbon energy through its multimillion pound advertising campaign. Chief executive Bernard Looney scrapped the advertising shortly after taking over in February 2020. Meanwhile investors are filing a growing number of shareholder resolutions to force change. “If you look at these things as a whole, there

	is pressure growing from all sides," says Joana Setzer at the Grantham Research Institute on Climate Change and the Environment at the London School of Economics, who focuses on climate litigation and environmental governance. "There are lots of different strategies being tried. People are saying — how can we push the boundaries even further?" "It's no longer a secret. Businesses that are complicit in enabling climate change, while ignoring the ramifications, are going to face higher legal risks going forward," says Carroll Muffett, chief executive at the Center for International Environmental Law, a non-profit organisation. "It is exceptionally rare that a single case changes corporate behaviour. But we're already in a place where Shell, ExxonMobil, Total and BP are all facing litigation." She adds: "It took three decades to turn tobacco litigation into a transformative moment, when plaintiffs began winning cases. With climate litigation we have covered the same ground in a decade. Now plaintiffs are not going to limit themselves to the carbon majors." Oil companies are already being forced by investors, regulators and the public to make greater disclosures about their environmental footprints. And at the same time they are being confronted by better climate science and more granular data on emissions, helped by new technologies.		
Q18	What are challenges the Oil & Companies are facing right now due to climate change issues?	**15**	**CO4**
Q19	How Policymakers can help the Oil & Gas Companies in reducing their carbon footprint?	**15**	**CO4**