

Name:	 UPES UNIVERSITY WITH A PURPOSE
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2018

Program: BA. LL.B. (Hons.) ENERGY LAWS
Subject (Course): Nuclear Energy Law
Course Code : LLBD421
No. of page/s: 4

Semester: VII
Max. Marks: 100
Duration: 3 Hrs

SECTION A (Objective Type Questions/Definitions)

10x1=10

Q. No.	<i>Attempt all questions</i>	Marks	CO
1	Who is the chairman of Atomic Energy Commission of India?	1	CO2
2	Discuss the section 23 of Atomic Energy Act 1962	1	CO1
3	This country holds its main source/large share of energy from nuclear fission;	1	CO1
4	IAEA headquarters situated at;	1	CO1
5	The India – US nuclear agreement famously known as;	1	CO2
6	The current strength of Nuclear Suppliers Group (NSG).	1	CO2
7	Name the Indian state which has operational nuclear power plants two different places	1	CO1
8	Define the application of Deuterium in Nuclear Power generation	1	CO1
9	How do we moderate Nuclear Reaction in the Reactor?	1	CO1
10	Define India Nuclear Insurance Pool (INIP)	1	CO4

SECTION B (Short Answer Questions)

4x5=20

Q. No.	<i>Attempt any four</i>	Marks	CO
11	Analyse the role & impact of Intl. Radiation Protection Standards & Rules 2004.	5	CO2
12	Describe international nuclear co-operation principles	5	CO1
13	Discuss the key drivers of nuclear energy industry development	5	CO1
14	‘India has had a checkered history with the international nuclear order.’ Discuss	5	CO4
15	Define the different types of nuclear power plant options for India	5	CO4
16	How does the focus of international nuclear law has evolved over a period in reaction to events?	5	CO2

SECTION-C (Descriptive/Analytical Questions)

2x10=20

Q.No.	<i>Answer any Two</i>	Marks	CO
17	It has been said that an institutionalized and effective regulatory mechanism and comprehensive legal framework is inevitable at global and national levels to carry out the nuclear energy operations. Analyse the main characteristics, principles, attributes and sources of an effective nuclear regulator.	10	CO3
18	Discuss the prime challenges and future prospects of nuclear civil liability regime in India under the ambit of Nuclear Civil Liability Act, 2010.	10	CO5
19	Explain the origin, composition and functions of AERB. The CAG report of 2012-13 highlighted certain long-standing concerns about the working of this regulatory body, analyse the main apprehensions on India's nuclear energy legal framework.	10	CO2

SECTION-D (Case Studies/ Application Based Questions)

30+20=50

Q.No.	<i>Both the questions are compulsory</i>	Marks	CO
20	<p>Taregna is a place in the Patna district in Bihar, India. It is situated 75 km east to Gaya and 135 km from Motihari. The place is notable as the construction site of the Taregna Nuclear Power Plant. It is also the location of hundreds of windmills used for power generation, eight of which are located inside the grounds of the nuclear plant. Since the beginning of 2010, this place has been embroiled in a nuclear plant controversy over its safety by its people. Recently there have been several struggles by local people against the project. Local people are afraid that in case of a natural disaster the reactor may blast. Local people have opinion that Nuclear power is dangerous and scientists have no idea how to dispose off its radioactive waste. An empirical study conducted in this area by Mr. Makru informed that based on random sampling it was found that 2-4 cancer deaths in a population of one lakh per year is normal. However, in Taregna this ratio is 3 in a population of 25,000. The tourists who come to Taregna avoid eating the fish here, which strangely enough does not attract flies like it does elsewhere. Now the people of Taregna know and understand that this is not just a fisher folk problem, they may be displaced, and they have to deal with radioactive poison. Almost all of them residing there oppose the Taregna Nuclear Power Plant[TNPP] for a few specific reasons such as The TNPP reactors are being set up without sharing the Environmental Impact Assessment (EIA), Site Evaluation Study and Safety Analysis Report with the people, or the people's representatives or the press. There is absolutely no democratic decision-making in or public approval for this project. The Bihar Government establishes clearly that "area between 2 to 5 km radius around the plant site, [would be] called the sterilization zone." This means that people in</p>		

	<p>this area could be displaced. But the TNPP authorities promise orally and on a purely ad hoc basis that nobody from the neighboring villages would be displaced. This kind of aphorism and doublespeak causes suspicion and fears of displacement. The coolant water and low-grade waste from the TNPP are going to be dumped in to the Punpun river which will have a severe impact on fish production and catch. This will undermine the fishing industry, push the fisher folk into deeper poverty and misery and affect the food security of the entire middle Bihar. Indian Prime Minster himself has spoken about terrorist threats to India’s nuclear power plants. He has said: the atomic establishments continue to remain prime targets of the terrorist groups and outfits.</p> <p><i>A. Don’t you think that the Indian government’s mindless insistence on nuclear power, utmost secrecy in all of its nuclear agreements and activities, and its sheer unwillingness to listen to the people’s concerns and fears are going against democratic principle of this country? Is it all for us, the people of India Or for the corporate profits of the Russian, American and French companies?</i></p> <p><i>A. As a developing nation we need energy efficiency to support our future industrial & domestic requirements. Large developing countries have to look at all sources of power. In this context the nuclear energy is an inevitable option for satisfying India's energy needs. If you look at the present level of per capita electricity consumption and economic development we need to invest more in nuclear energy. Looking at the given situation, how do you balance the arguments?</i></p> <p><i>B. Throughout the world many developed countries are shutting down their nuclear reactors and start looking into alternative ways to produce energy in a safer and greener way. The resource rich, knowledgeable and quality/safety conscious countries could not avert nuclear emergencies. Can our densely populated and ill-prepared society ever hope to forestall the possible human catastrophe from a nuclear mishap? What is your opinion on our future nuclear energy options?</i></p>	<p>10</p> <p>10</p> <p>10</p>	<p>CO4</p> <p>CO5</p> <p>CO3</p>
<p>21</p>	<p>The appellants herein in the said writ petition sought disclosure of information from the respondents relating to purported safety violations and defects in various nuclear installations and power plants across the country including those situated at Trombay and Tarapur. The said demand of information was made purported to be relying on or on the basis of an information that the Atomic Energy Regulatory Board (AERB) prepared a report in November, 1995 documenting therein safety defects and weaknesses citing 130 instances which are said to be matters of concern. The appellants contended that a former Chairman of the AERB, Dr. Gopalkrishnan also expressed serious concern about the safety of nuclear installations in India disclosing that serious accidents had occurred in some of the nuclear facilities including one at Narora Atomic Power Plant in the State of U.P. and Kaiga Atomic Power Plant situated in the State of Karnataka.</p> <p>The appellants had sought for disclosure of a report on safety of nuclear installations, submitted by the Atomic Energy Regulatory Board (AERB) to the Delhi government in November 1995, envisaging issues relating to purported</p>		

	<p>safety violations and defects on various nuclear installations & Power Plants across the country. It was contended by UOI that the report was classified as "Secret" as it pertains to several sensitive facilities carried out dummy nuclear installation and raised a plea of privilege in relation to the said report. The petitioners had moved the Supreme Court after the Bombay High Court had rejected their petition in January 1997. The petitioners had also raised doubt about the safety aspect with regard to disposal of nuclear waste. The Supreme Court held that for determining a question when a claim of privilege is made the following questions need to be answered:(i) whether the document in respect of which privilege is claimed, relation to affairs of any state;(ii) whether the disclosure of the contents would be against public interest.</p> <p><i>A. Discuss the background of this case and along with that analyse the Court's rationale on the restrictions as regard disclosure of information as contained the Atomic Energy Act and specifies the areas where such disclosures are prohibited</i></p> <p><i>B. If nuclear related activity is adequately covered in other laws like environmental protection, industrial safety, mining, transport and electricity regulation, it would be difficult to think about exclusive law for nuclear energy. Discuss in brief the factors which you think are responsible to have a separate legislation for nuclear activities in India.</i></p>		
		10	CO4
		10	CO5

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SECTION A (Objective Type Questions/Definitions)

10x1=10

Q. No.	<i>Attempt all questions</i>	Marks	CO
1	The Statute of the International Atomic Energy Agency (IAEA) was adopted by an International Conference in New York on ---October---__.	1	CO2
2	Define the role of NEA.	1	CO2
3	The current strength of Nuclear Suppliers Group (NSG).	1	CO2
4	The India – US nuclear agreement famously known as;	1	CO3
5	How many countries ratified the NPT?	1	CO1
6	The CPPNM of 1979 provides for certain levels of _____protection to be applied to nuclear material used for peaceful purposes by contracting parties	1	CO1
7	The normal life span of power reactor is;	1	CO1
8	Define EURATOM	1	CO5
9	The Indian Atomic Energy Act came into force on;	1	CO1
10	The risk of a nuclear meltdown and an event similar to the-----catastrophe would haunt even the biggest proponents of nuclear energy	1	CO4

SECTION B(Short Answer Questions)

4x5=20

Q. No.	<i>Attempt any four</i>	Marks	CO
11	Explain & Analyse the principal components of a Nuclear Plant. What is the impact of NSG on Indian Nuke Industry	5	CO4
12	Define the different types of nuclear Plant options for India.	5	CO5
13	Write short note on the global impact UN committee on Radiation Effect.	5	CO1
14	Discuss the geological occurrences of radioactive minerals in India & the world. Discuss the essence of safe disposal of Radioactive Fuels ,1987	5	CO1
15	Discuss & analyse the Radioactive Minerals in India & the world. Discuss the essence of Fissile material Cutt off Treaty	5	CO1
16	Briefly evaluate the activities of NPCIL	5	CO3

SECTION-C (Descriptive/Analytical Questions)				2x10=20
Q.No.	<i>Answer any Two</i>	Marks	CO	
17	Discuss & Analyse the principal roles and responsibilities of IAEA and its relationship with NPT. How does these organizations impact the Nuclear Programmes of India?	10	CO5	
18	It has been said that an institutionalized and effective regulatory mechanism and comprehensive legal framework is inevitable at global and national levels to carry out the nuclear energy operations. Critically evaluate the performance of AERB	10	CO4	
19	In order to reposition the national nuclear regulator AERB into de jure watchdog, the proposal for setting up a Nuclear Safety Regulatory Authority (NSRA) has been considered and the Government had introduced the Nuclear Safety Regulatory Authority Bill, 2011. Why the government considered the new regulator in the area, write main features of said proposed legislation and why the bill has not considered again?	10	CO2	
SECTION-D (Case Studies/ Application Based Questions)				30+20=50
Q.No.	<i>Both the questions are compulsory</i>	Marks	CO	
20	Judicial intervention on nuclear energy safety discourse in India is very recent. The debate on the Civil Nuclear Liability for Damage Act 2010 in the Parliament and the 2011 Fukushima nuclear accident in Japan provoked public apprehension about nuclear safety in India. The Kudankulam Nuclear Power Project (KNPP) in South India became the flash point. The localized agitation against the project consequently gained momentum and was taken up aggressively by civil society groups citing safety compromise on various technical parameters. Though the government constituted expert committees to assuage any misgivings, the matter, however, was challenged before the Madras High Court and as appeal before the Supreme Court of India. The former assured safety and legality of the project and the latter endorsed this view, with supplemental directions, determining the superiority of expert committees who unequivocally concluded that the project was safe. The Courts similarly converged on the issue that the project was of national importance. On the access to project information, though the Central Information Commission ordered to make public the KNPP site and safety evaluation reports, however, Nuclear Power Corporation appealed to the Delhi High Court arguing the information was proprietary and obtained a stay order.			

	<p>The critics has an opinion that the Supreme Court should not delve into policy decisions and determine what's best for India. The Court concluded its reasoning in Kundakulam Nuclear Project case by stating that all expert teams were unanimous in their opinion of the safety and security of the Kudankulum Nuclear Power Plant, both to life and property of people and environment. Hence, the Court had to respect the country's national nuclear policy as reflected in the Atomic Energy Act, and the same had to be given effect in the interests of the people's welfare and India's economic growth. This is one of the few cases where inspite of a huge uproar against the nuclear power plant, the Supreme Court allowed it. Here the court made a policy decision to conclude that nuclear energy for India is more important than a few protestors. Some believe that it is not the role of the Supreme Court to make policy decisions.</p> <p><i>A. Don't you think that the Indian government's mindless insistence on nuclear power, utmost secrecy in all of its nuclear agreements and activities, and its sheer unwillingness to listen to the people's concerns and fears are going against democratic principle of this country? Is it all for us, the people of India or for the corporate profits of the Russian, American and French companies?</i></p> <p><i>B. As a developing nation we need energy efficiency to support our future industrial & domestic requirements. Large developing countries have to look at all sources of power. In this context the nuclear energy is an inevitable option for satisfying India's energy needs. If you look at the present level of per capita electricity consumption and economic development we need to invest more in nuclear energy. Looking at the given situation, how do you balance the arguments?</i></p> <p><i>C. Throughout the world many developed countries are shutting down their nuclear reactors and start looking into alternative ways to produce energy in a safer and greener way. The resource rich, knowledgeable and quality/safety conscious countries could not avert nuclear emergencies. Can our densely populated and ill-prepared society ever hope to forestall the possible human catastrophe from a nuclear mishap? What is your opinion on our future nuclear energy options?</i></p>	<p>10</p> <p>10</p> <p>10</p>	<p>CO4</p> <p>CO5</p> <p>CO3</p>
21	<p>The issue involved in this petition is regarding the apprehension expressed arising from the post- Tsunami concern. According to the petitioners, on December 26, 2004, Tsunami devastated the east and west coasts of southern India and the Andaman and Nicobar Islands. The public concern is on account of the experts once again reminding publicly on the likely dangers from the geological fault- line running at the middle of Thane Creek which separates Mumbai from New Mumbai cities. A further public concern is from the fact that a huge nuclear establishment is located on the west bank of Thane Creek with known</p>		

	<p>geological fault line and the land mass of thickly populated Mumbai being actually of seven islands joined from reclamation.</p> <p>The petitioners mention that on the west bank of Thane Creek is located Bhabha Atomic Research Centre, which is a premier multi- disciplinary Nuclear Research Centre of India having excellent infrastructure for advanced research and development with expertise covering the entire spectrum of Nuclear Science and Engineering and related areas. According to the petitioners, geographically, BARC is located on the eastern suburb of Mumbai on the west bank of Thane Creek which has a geological fault line. According to the petitioners, there are three major fault- lines around Mumbai. They lie under the Thane, Panvel and Dharamtar Creeks. Mumbai falls in Seismic Risk Zone III. It can experience earthquakes measuring up to 6.5 on the Richter Scale. The island city, however, needs more attention due to a two- fold problem: reclaimed land and high rise buildings. Should an earthquake of magnitude 6 or more strike Mumbai, the stability of high rise buildings and even multi- storeyed buildings may emerge as a very serious concern. The petitioners also mentioned that the radioactive nuclear waste leaks at BARC location and discharges into the Thane Creek. It is submitted that the public is in total darkness as to the safety aspects of all nuclear establishments, including BARC.</p> <p>A. <i>Discuss the origin, composition and functions of BARC</i></p> <p>B. <i>Explain the nature of the petition and contentions of the petitioner</i></p> <p>C. <i>Analyse the contentions of the responded in the said case</i></p> <p>D. <i>Evaluate the reasoning and correctness of the court decision on the said case</i></p>	<p>5</p> <p>5</p> <p>5</p> <p>5</p>	<p>CO2</p> <p>CO4</p> <p>CO4</p> <p>CO3</p>
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