Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

(A constituent unit of MAHE, Manipal)

VII SEMESTER B.TECH. CIVIL ENGINEERING END SEMESTER EXAMINATIONS

NOVEMBER 2018

SUBJECT: ENVIRONMENTAL IMPACT ASSESSMENT AND AUDITING [CIE 4021]

Date of Exam: 27th November 2018 Time of Exam: 2:00-5:00PM Max. Marks: **50**

Instructions to Candidates:

- Answer ALL the questions & missing data may be suitably assumed

1A.	Highlight any two advantages and disadvantages each for box models and Gaussian Plume Models for modeling dispersal of air pollutants.	**(04)**	**CO1, CO3**
1B.	Highlight any three strengths and three limitations of EIA.	**(06)**	**CO2**
2A.	Explain the different avenues by which we can deduce the initial list of factors for the description of the environmental setting.	**(04)**	**CO1, CO2, CO5**
2B.	Write an explanatory note on the importance of public participation in an EIA process and how is noise quantified using Sound pressure level.	**(06)**	**CO1, CO2,**
3A.	Describe the evolution of EIA laws in India.	**(04)**	**CO1, CO2**
3B.	Explain the terms dispersion and sorption and their combined influence on the advective flow of pollutants in soil from a continuous release source with the help of diagram	**(06)**	**CO1, CO3**
4A.	With the help of a neat diagram, briefly explain the process of selection of alternatives for a project	**(04)**	**CO1, CO3**
4B.	Explain leopold, stepped and component interaction matrix with the help of an example.	**(06)**	**CO4**
5A.	Briefly explain demand, scheduling, input and routing types of alternatives.	**(04)**	**CO4, CO5**
5B.		**(06)**	**CO1, CO3**

Air Polln. Parameters	**Sub-index Values**					
	2	**4**	**8**	**12**	**16**	**20**
CO (ppm)	0-1	1-2	2-4	4-6	6-8	8-35
NO2	0-0.005	0.005-0.01	0.01-0.02	0.02-0.06	0.06-0.10	0.10-0.20
Oxidants (ppm)	0-0.5	0.5-1.0	1-2	2-3	3-4	4-5
Visibility	12-24	8-12	6-8	4-6	2-4	0-2

	The ambient air quality measurements for a location are as follows: CO (PPM)= 3 NO2= 0.015, Oxidants (ppm)= 1.5, Visibility= 3m. Compute the air quality index based on the sub-indices given above. Highlight any two advantages of using this method of computing Air quality over each of the other methods.		