

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(END SEMESTER EXAMINATION)**

**CLASS: MSc.  
BRANCH: ENVIRONMENTAL SCIENCE AND MANAGEMENT**

**SEMESTER : II  
SESSION : SP/2025**

**SUBJECT: ES509 AIR QUALITY MANAGEMENT AND NOISE POLLUTION**

**TIME: 3 Hours**

**FULL MARKS: 50**

**INSTRUCTIONS:**

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
  2. Attempt all questions.
  3. The missing data, if any, may be assumed suitably.
  4. Before attempting the question paper, be sure that you have got the correct question paper.
  5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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		<b>CO</b>	<b>BL</b>
Q.1(a)	Classify different types of aerosols and describe them with examples.	[5]	1 2
Q.1(b)	Explain the acid rain phenomena with relevant equations.	[5]	1 2
Q.2(a)	Discuss the ambient air particulate matter sampling and analysis by beta attenuation method.	[5]	1 2
Q.2(b)	Explain different types of plume behavior.	[5]	2 2
Q.3(a)	'Coastal areas do not accumulate air pollutants but the mountain and valley can accumulate air pollutants to critical levels' -justify and explain why?	[5]	2 4
Q.3(b)	Electrostatic precipitator and scrubbers are the most efficient air pollution control equipment, justify with their working principles.	[5]	3 3
Q.4(a)	According to the Bharat stage VI what are the new technologies introduced to control vehicular air pollution.	[5]	3 2
Q.4(b)	Explain the effects of the noise pollution on human health, ecology and environment.	[5]	4 2
Q.5(a)	Describe the noise pollution monitoring process and the instruments used.	[5]	5 3
Q.5(b)	Briefly explain the noise pollution control strategies.	[5]	5 2

:29/04/2025:E