

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, July- 2020

Course Name: Mine Environmental Engg.

Programme Name: B. Tech, Mining Engineering

Course Code: PEMI 3003

Semester: VI

Time: 03 hrs

Max. Marks: 100

SECTION A (60 Marks)

S. No.		Marks	CO
Q 1	<p>The-----Act explicitly prohibits discharges of environmental pollutions in excess.</p> <p>The Plume concentration at the ground level is--- the concentration at discharge point.</p> <p>The main factor of plume dispersion is - _.</p> <p>The main pollutant in Air quality is -----</p> <p>Green belt development can reduce/ control the sound level at -----</p> <p>An increase in dissolved solids in water, -----the conductivity of the water.</p> <p>The most common problem created by tailings are for -----</p> <p>Ground Vibration is independent of -----</p> <p>Scaled distance is related to -----</p> <p>The main purpose of using Deck Charging is -----</p>	10	CO2
Q 2	<p>For fine grained rock/soil, consolidation will be high and the area will be -----</p> <p>For tailings, drained shear strength is -----the undrained shear strength.</p> <p>EIA should be done for Category ----- type projects.</p> <p>The boundary for deciding Category A or B of Mining Lease Area is at _----.</p> <p>The Validity of ToR in Environmental Clearance is -----</p> <p>The main component of an EMP is -----</p> <p>The Windrose diagram is useful to denote ----- in different directions.</p> <p>Main purpose to conduct the Secondary blasting is to reduce -----</p> <p>Progressive Mine Closure Plan has to be submitted within ----_ from the date of notofication.</p> <p>The most environmental damage of blasting in surface mines is -----</p>	10	CO1
Q 3	<p>Mark as True/ Flase</p>	10	CO2

	<p>Adiabatic lapse rate is independent of pressure.</p> <p>Downwash of plume and eddies/wake formation are same phenomenon.</p> <p>The Air quality standards are weighted in daily, monthly and annual basis.</p> <p>The Sound Pressure Level is the intensity of sound and measured in dB (A).</p> <p>Attenuation relates to decrease in intensity fo sound with distance.</p> <p>The Noise Level in India for residential area in day/night is 75/65 dB(A), respectively.</p> <p>The most important factor for water pollution is Acid Mine Drainage.</p> <p>BOD is always greater than COD.</p> <p>Water Retention Dams are founded in rock/ grouting, not like Tailing Dams.</p> <p>Void ratio of tailings is greater than porosity of tailings.</p>																																			
Q 4	<p>Mark as True/ False</p> <p>Resonance generates when structure's natural frequency is mixed with ground vibration frequency.</p> <p>PPV limits by DGMS is provided within Dominant Exciting Frequency range 20-20000 Hz.</p> <p>For B2 Category of Mining Lease area, no environmental clearance is needed.</p> <p>There has to be recorded/reported Pubic Involvement when applying for the Environmental Clearance.</p> <p>Only main office construction is allowed before getting Environmental Clearance.</p> <p>EMP is an essential part of EIA.</p> <p>Windrose diagram is has a total of 16 directional divisions.</p> <p>Progressive Closure Plan has to be reviewed every 3 years of mining.</p> <p>Smaller wavelength vibration is susceptible to create less damage than greater wavelength vil</p> <p>Final Closure Plan must be approved before 9 months from the proposed closure of mine.</p>	10	CO4																																	
Q 5	<p><u>Match the following column</u></p> <table border="0"> <tr> <td colspan="2"><i>i. Environmental Regulations</i></td> <td><i>Component</i></td> </tr> <tr> <td>a) Water Prevention and Control of Pollution Act and resources</td> <td></td> <td>Economic incentives</td> </tr> <tr> <td>b) Water Cess Act</td> <td></td> <td>Mine Effluent Standards</td> </tr> <tr> <td>c) Environment Protection Act</td> <td></td> <td>Sanctuary establishment</td> </tr> <tr> <td>d) Wild Life protection Act</td> <td></td> <td>Protection and Improvement of Environment</td> </tr> <tr> <td colspan="2"><i>ii. Behaviour of Smoke Plumes</i></td> <td><i>Meaning</i></td> </tr> <tr> <td>a) Fanning</td> <td colspan="2">Plumes go upward due to stable inversion near ground</td> </tr> <tr> <td>b) Fumigation</td> <td colspan="2">Intense heat form large convective eddies which break plumes</td> </tr> <tr> <td>c) Looping</td> <td colspan="2">Convective eddies form and bring back heavy effluents to ground</td> </tr> <tr> <td>d) Lofting</td> <td colspan="2">Inversion exists and plumes rises hgh and then level off</td> </tr> <tr> <td colspan="2"><i>iii. Pollutant or Source</i></td> <td><i>Example</i></td> </tr> </table>	<i>i. Environmental Regulations</i>		<i>Component</i>	a) Water Prevention and Control of Pollution Act and resources		Economic incentives	b) Water Cess Act		Mine Effluent Standards	c) Environment Protection Act		Sanctuary establishment	d) Wild Life protection Act		Protection and Improvement of Environment	<i>ii. Behaviour of Smoke Plumes</i>		<i>Meaning</i>	a) Fanning	Plumes go upward due to stable inversion near ground		b) Fumigation	Intense heat form large convective eddies which break plumes		c) Looping	Convective eddies form and bring back heavy effluents to ground		d) Lofting	Inversion exists and plumes rises hgh and then level off		<i>iii. Pollutant or Source</i>		<i>Example</i>	10	CO2
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