

Name:
Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
Supplementary Examination, May 2022

Course Name: Mine Legislation & Safety

Semester: VIII

Programme Name: B. Tech, Mining

Time: 03 hrs.

Course Code: PEMI 4004

Max. Marks: 100

Instructions:

SECTION- A (20 Marks)

Q 1	i. Air quantity checking for mechanical ventilators in gassiness type-II mines will be once in ----- days a) 30 b)14 c) 24 d) 27 ii. In Non sealed off areas, air supply should be ----- a) Less b) least c) constant d) maximum iii. Mines Creche rules are administrated by --- a) IBM b) Ministry of labour c) CIL d) DGMS iv. Penalties & Procedures come under ---- a) DGMS b) Factory act c) IBM d) Mines Rule	04	CO1
Q 2	i. O/b height in alluvium shouldn't be greater than ----- a) 3.5 mtrs b) 7.5 mtrs c) 9 mtrs d) 4 mtrs ii. Maximum number of persons working in overman's district should be less than – a) 200 b)250 c)100 d) 150 iii. Life span of treated timber used in rail sleeper is -----yrs (max) a) 5 b) 3 c) 8 d)17 iv. Stepness of working in overman's district will be ----- a) 1 in 7 b) 1 in 5 c) 1 in 4 d) 1 in 8	04	CO3
Q 3	i. Minimum height of shelter is > ----- mtrs a) 2.5 b) 2.8 c) 3 d) 3.3 ii. The reporting authority for cancellation & suspension of certificates is ---- a) Manager b) CIM c) RI d) DGM iii. For appointment of mechanical engineer, aggregate power of all machines > ---- a) 1500 hp b) 1200 hp c) 800 hp d) 1000 hp iv. Post shot-firing, area within a distance of --- mtrs from face needs to be cleaned a) 1.8 b) 2 c) 2.5 d) 1.2	04	CO2
Q 4	i. Fire extinguisher used to treat electrical fires is ---- a) Foam b) water c) automatic d) CO ₂ type ii. As per Reg.177 of MMR 1961 Every Fence erected on the surface shall once at least in every week be examined by --- a) Competent b) Manager c) Asst. Manager d) Overman iii. Flash back arrestor” should be provided for _____ a) Gas wiewling b) compressor c) dumper d) generator iv. Manholes are found in --- haulage a) Endless b) gathering c) direct d) main & tail	04	CO1
Q 5	i. Minimum height of shelter is > ----- mtrs b) 2.5 b) 2.8 c) 3 d) 3.3 ii. The reporting authority for cancellation & suspension of certificates is ----	04	CO2

	<p>b) Manager b) CIM c) RI d) DGM</p> <p>iii. For appointment of mechanical engineer, aggregate power of all machines > ---- b) 1500 hp b) 1200 hp c) 800 hp d) 1000 hp</p> <p>iv. Post shot-firing, area within a distance of --- mtrs from face needs to be cleaned b) 1.8 b) 2 c) 2.5 d) 1.2</p>		
SECTION-B (40 Marks)			
Q 6	Rescue room can served as rescue station in U/G working". Support the same with suitable justifications	10	CO3
Q 7	In U/g mine working, total number of persons ordinarily employed are >5000. Total number of personnel in rescue room are 7. Explain who are they and their requisite qualifications.	10	CO3
Q 8	Summarize ISO 19434:2017, classification scheme of mining accidents, highlighting the key parameter	10	CO2
Q 9	Size of overman's district" is used everywhere in U/G operation. Support/ Oppose the same with suitable argument.	10	CO2
	OR What do you mean by standards of ventilation and standing order in ventilation		
SECTION-C (40 Marks)			
Q 10	<p>a. Indian Bureau of Mines, Ministry of Mines and D. G. M. S are planning to do change in existing MMR/ CMR. What is the provision for the same?</p> <p>b. What is the provision for shot-firer in Mine vocational training act, 1986</p>	10+10	CO3
Q 11	<p>Suggest the statutory provisions (for Inspection by official) for an underground coal. Assume the mine to be of gassiness type-II & chances of spontaneous heating are very high.</p> <p>OR</p> <p>In a U/G mine working, blasting is going to take place in the second shift. Being the Manger of mine, appraise</p> <p>1. Statutory provisions for shot-firer & helper with valid reasons 2. Special precautions in stone drifts</p>	20	CO4