

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May 2020

Course Name : Mine Legislation & Safety

Semester : VIII

Programme Name : B.Tech Mining Engineering

Time : 03 hrs

Course Code : MIEG 423

Max. Marks : 100

Instructions: ~~Draw suitable sketches wherever necessary~~

SECTION A

S. No.		Marks	CO
Q 1	<p>Mark the statement as True/ False</p> <ul style="list-style-type: none">i. Annual return of mine is submitted on 20th Januaryii. Manager acts as the team leader for Hazard Management teamiii. Headlights in Diesel operated vehicles should be able to show obstructions maximum up-to 60m from equipmentiv. Dead Rent for Diamond is 4000 rupees in the 3rd & 4th Yearv. For B-Type crèche, plinth area should be 90 metersvi. Lamp durability test is performed from a distance of 2 metersvii. In MMR, 2 RAP is for raisingviii. Number of persons in committee as per Section-12, are 6ix. Chapter II of Rescue Rule deals with conduct of rescue workx. Shelter should be at a distance of 10 mtrs from boiler plant.	10	CO1
Q 2	<ul style="list-style-type: none">i. In OMR, Correct sequence for Hazardous zone is -----ii. In sinking shaft, shear pin is replaced weekly/ monthly/ yearly basisiii. As per Mining crèche rule, age restriction is up to -----iv. Battery specification for safety lamp is -----v. During shaft sinking, distance of ladderway from bottom should be less than -----vi. Maximum threshold for Methalarm is -----vii. Cap lamp batteries should be cleaned once in 7 days/ 15 days/ 30 daysviii. Percentage test is performed when Methane percentage goes beyond -----ix. Rescue & Recovery report to be sent within -----days of work completionx. In oil mining, Appointment / Termination notice should be served in form --	10	CO2
Q 3	<ul style="list-style-type: none">i. Colour code of explosive for second shift is -----ii. Fuel in GL-5 is -----iii. INMOSSA stands for -----iv. Illumination standard in first aid room should be -----v. Silica percentage in incombustible dust should be -----vi. No tree/ debris is allowed within -----mtrs from sides of excavationvii. Ballast size in haulage track is -----viii. Life span of treated timber is -----ix. Over the diameter of explosive cartridge, drilling clearance should be -----mtrs.	10	CO4

	ix. For overman's district, steepness of working should be -----. x. Number of persons in rescue should be less than -----.		
SECTION B			
Q 4	"Size of overman's district" is used everywhere in U/G operation. Support/ Oppose the same with suitable argument.	10	CO2
Q 5	For a U/G Coal mine, examination held. After examination certificates were verified. Out of total selected candidates, for 5 candidates, medical certificates found to be fraudulent. Assuming yourself as the chairman of board, suggest i. Necessary action needs to be taken ii. Legal provisions for the candidates	10	CO3
Q 6	There are 02 levels in a U/G coal mine. The mine is of gassiness type-I and working going on in Level-2. In Level-1, illumination standard is as per norm. In Level-2, lighting is a problem in most of the parts. Being the Asst. Manager of the mine, investigate the situation and i. Identify the issue in lighting ii. Select the most suitable method of lighting	10	CO1
Q 7	i. Outline the specifications for canteen committee ii. Explain Quarterly & annual return provisions in OMR, 1986. iii. Analyze the need of electricity rule in Mine iv. According to workmen compensation act, define Man days lost v. What is the meaning of special category employees in Vocational Training Rule, 1986?	10	CO3
Q 8	a. "Rescue room can served as rescue station in U/G working". Support the same with suitable justifications b. Discuss the illumination standard in gassy coal mine OR A mining company has planned to open up a new metal mine, which is at its final stage. Total number of employees needed: 560 out of which 530 selected & rest 30 are under medical scrutiny. Out of those 30, 10 are detected with some medical issues which they feel need to be crosschecked. In view of the above, evaluate statutory processes need to follow.	05*2 =10 10	CO2
SECTION C			
Q 9	Mr. X (Agent) has two mines within a distance of 3kms. On 26 th October 1955 mining operation started. Detailed information about the mine is as follows 1. There were two shafts (Drum & Friction winder) commissioned in the year 1955 and 1984 respectively. 2. Depth of working is more than 250 mtrs.	8+12	

	<p>3. Drum Winder & Friction winder used for man and material winding respectively & climatic condition is humid. In such prevailing conditions, design man and material handling system of the mine using CMRs.</p> <p style="text-align: center;">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> <ol style="list-style-type: none">1. Statutory provisions for shot-firer & helper with valid reasons2. Special precautions in stone drifts	10+10	CO4
--	---	--------------	------------