



**UNIVERSITY OF PETROLEUM
AND ENERGY STUDIES**

End Semester Examination – May, 2018

Program/course: B.TECH/ MINING ENGG
Subject: MINE PLANNING & DESIGN
Code : MIEG 236
No. of page/s: 02

Semester – IV
Max. Marks : 100
Duration : 3 Hrs

Instructions:

- a. Answers must carry the supporting material such as equations and diagrams, wherever necessary
- b. Section-A is compulsory
- c. In section-B, attempt any 1 from Q-5
- d. Section C, attempt any 1 from Q-7

Section A

20Marks.

1. Each question carries 04 marks
 - i) Differentiate between planning & implementation phase
 - ii) Discuss the Mineral supply process & it's implication on mining
 - iii) Discuss the types of reclamation plan
 - iv) What are the minimum numbers of levels included in mining project?
 - v) Included area method VS Extended area method

Section B

40 Marks

2. How many types of mine maps are known & what aspects are taken into consideration in each of them? (10 marks)
3. Reclamation is done post mining/ simultaneous with mining, why? Analyze the purpose of Reclamation plan in mining (10 marks)
4. Describe the various stages involved in Land Reclamation (10 marks)
5. What are the stages involved in mining operation? What essential points need to be included in mine planning stage & when the actual mining starts (3+7=10 marks)

Or

What do you mean by Implementation phase? What are the two stages involved in the same (5+5=10 marks)

Section C

40 Marks

Each question carries 20 Marks

6. Using prismoidal method, deduce the formula to find grade of any deposit. Examine the superiority of prismoidal method over weighted average method in calculating grade of any deposit (10+10)

7. With given set of information find out the average grade of a deposit using polygon technique

Sample location	Thickness (fts)	Area (sq.mtrs)	Tonnage Factor	grade
B-1	150	5320	10	0.71
B-2	135	5300	10	0.66
B-3	180	4400	10	0.82
B-4	175	5520	10	0.75
B-5	155	6800	10	1
B-6	180	4960	10	0.97
B-7	250	4520	10	1.21
B-8	240	4640	10	1.36
B-9	150	5840	10	0.93
B-10	135	4840	10	0.87
B-11	120	3760	10	0.81
B-12	165	4270	10	0.75
B-13	135	4700	10	0.68

Or

What do you mean by schedule? How many types of levels are there? Describe the activities involved in each of them (5+5+10)