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Total number of printed pages - 02

B.TECH
PECE5403

7th Semester Regular / Back Examination 2016 - 17

MINERAL PROCESS ENGINEERING

BRANCH : Chemical

Time : 3 Hours

Max Marks : 70

Question Code : Y206

Answer Question No. 1 which is compulsory and any FIVE from the rest.

The figures in the right-hand margin indicate marks.

Answer all parts of a question at a place.

1. **Answer the following questions :** **2 x 10**
- (a) What is dead roast?
 - (b) What do you mean by amalgamation inhibitors?
 - (c) All minerals are ore or all ores are minerals. Choose the correct and justify.
 - (d) What is briquetting?
 - (e) Name the bacteria used for leaching process.
 - (f) Differentiate between calcinations and roasting.
 - (g) Write the characteristics of electrolytes used in electrolytic operation.
 - (h) Differentiate between electro-winning and electro-refining processes.
 - (i) What is anode effect?
 - (j) What is heap leaching?
2. (a) What do you mean by roasting? Give a brief idea about different types of roasting. **1+4**
- (b) With a neat leveled diagram describe the working principle of multiple hearth roasting. **05**
3. (a) Discuss in detail the bacterial leaching method for the treatment of ores. Write the reactions, advantages, and uses. **05**
- (b) Discuss about leaching process variables. **05**
4. Explain in detail the electrochemical methods used for the treatment of minerals and ores. **10**

