

Code No: 07A4EC16

R07**Set No. 2**

II B.Tech II Semester Examinations, APRIL 2011

MINERAL DRESSING

Metallurgy And Material Technology

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) It is desired to separate Mineral particles A (specific gravity 1.2) and B (1.8) using heavy suspension of solids in water. You are to choose a solid for suspension from quartz A (2.65) and Galena (7.5) to make the suspension. Indicate by calculation which of the above two solids is preferred for making the suspension.
(b) Discuss lessing process in detail. [8+8]
2. (a) What is Jigging?
(b) Draw a neat sketch and explain the working of a fixed sieve jig. [5+11]
3. (a) The ratio of concentration is preferred in ferrous ore industries while recovery is preferred in non-ferrous industries. Justify.
(b) Discuss Ball-Nortan drum separator. [6+10]
4. (a) Draw a neat sketch of elutriator and describe its working.
(b) Explain the working of a 'centrifuge' to study the size of the materials. [8+8]
5. (a) Why beneficiation is done before metal extraction? Describe the different methods of beneficiation.
(b) Explain the principles of flotation process. [10+6]
6. (a) Explain the various factors on which the energy consumed by a Jaw crusher depends.
(b) Explain the following terms with reference to the usage of Jaw crusher
i. Break down
ii. Wear of Jaw plates [8+8]
7. (a) Explain why is it difficult to quantify the efficiency of a classifier.
(b) Explain about efficiency of a classifier.
(c) Explain about any one scrubbing classifier. [6+5+5]
8. Write an essay on the recent developments and trends in grinding mills. [16]

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R07**Set No. 4**

II B.Tech II Semester Examinations, APRIL 2011
MINERAL DRESSING
Metallurgy And Material Technology

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Draw a neat sketch of elutriator and describe its working.
 (b) Explain the working of a 'centrifuge' to study the size of the materials. [8+8]
2. (a) It is desired to separate Mineral particles A (specific gravity 1.2) and B (1.8) using heavy suspension of solids in water. You are to choose a solid for suspension from quartz A (2.65) and Galena (7.5) to make the suspension. Indicate by calculation which of the above two solids is preferred for making the suspension.
 (b) Discuss lessing process in detail. [8+8]
3. (a) Explain why is it difficult to quantify the efficiency of a classifier.
 (b) Explain about efficiency of a classifier.
 (c) Explain about any one scrubbing classifier. [6+5+5]
4. (a) The ratio of concentration is preferred in ferrous ore industries while recovery is preferred in non-ferrous industries. Justify.
 (b) Discuss Ball-Norton drum separator. [6+10]
5. (a) Why beneficiation is done before metal extraction? Describe the different methods of beneficiation.
 (b) Explain the principles of flotation process. [10+6]
6. (a) What is Jigging?
 (b) Draw a neat sketch and explain the working of a fixed sieve jig. [5+11]
7. (a) Explain the various factors on which the energy consumed by a Jaw crusher depends.
 (b) Explain the following terms with reference to the usage of Jaw crusher
 - i. Break down
 - ii. Wear of Jaw plates [8+8]
8. Write an essay on the recent developments and trends in grinding mills. [16]

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R07**Set No. 1**

II B.Tech II Semester Examinations, APRIL 2011

MINERAL DRESSING

Metallurgy And Material Technology

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Why beneficiation is done before metal extraction? Describe the different methods of beneficiation.
- (b) Explain the principles of flotation process. [10+6]
2. (a) Explain the various factors on which the energy consumed by a Jaw crusher depends.
- (b) Explain the following terms with reference to the usage of Jaw crusher
 - i. Break down
 - ii. Wear of Jaw plates [8+8]
3. (a) The ratio of concentration is preferred in ferrous ore industries while recovery is preferred in non-ferrous industries. Justify.
- (b) Discuss Ball-Norton drum separator. [6+10]
4. (a) Draw a neat sketch of elutriator and describe its working.
- (b) Explain the working of a 'centrifuge' to study the size of the materials. [8+8]
5. (a) It is desired to separate Mineral particles A (specific gravity 1.2) and B (1.8) using heavy suspension of solids in water. You are to choose a solid for suspension from quartz A (2.65) and Galena (7.5) to make the suspension. Indicate by calculation which of the above two solids is preferred for making the suspension.
- (b) Discuss lessing process in detail. [8+8]
6. (a) What is Jigging?
- (b) Draw a neat sketch and explain the working of a fixed sieve jig. [5+11]
7. (a) Explain why is it difficult to quantify the efficiency of a classifier.
- (b) Explain about efficiency of a classifier.
- (c) Explain about any one scrubbing classifier. [6+5+5]
8. Write an essay on the recent developments and trends in grinding mills. [16]

Code No: 07A4EC16

R07**Set No. 3**

II B.Tech II Semester Examinations, APRIL 2011
MINERAL DRESSING
Metallurgy And Material Technology

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) What is Jigging?
 (b) Draw a neat sketch and explain the working of a fixed sieve jig . [5+11]
2. Write an essay on the recent developments and trends in grinding mills. [16]
3. (a) Draw a neat sketch of elutriator and describe its working.
 (b) Explain the working of a 'centrifuge' to study the size of the materials. [8+8]
4. (a) The ratio of concentration is preferred in ferrous ore industries while recovery is preferred in non-ferrous industries. Justify.
 (b) Discuss Ball-Nortan drum separator. [6+10]
5. (a) Why beneficiation is done before metal extraction? Describe the different methods of beneficiation.
 (b) Explain the principles of flotation process. [10+6]
6. (a) It is desired to separate Mineral particles A (specific gravity 1.2) and B (1.8) using heavy suspension of solids in water. You are to choose a solid for suspension from quartz A (2.65) and Galena (7.5) to make the suspension. Indicate by calculation which of the above two solids is preferred for making the suspension.
 (b) Discuss lessing process in detail. [8+8]
7. (a) Explain why is it difficult to quantify the efficiency of a classifier.
 (b) Explain about efficiency of a classifier.
 (c) Explain about any one scrubbing classifier. [6+5+5]
8. (a) Explain the various factors on which the energy consumed by a Jaw crusher depends.
 (b) Explain the following terms with reference to the usage of Jaw crusher
 - i. Break down
 - ii. Wear of Jaw plates [8+8]
