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18MN72

Seventh Semester B.E. Degree Examination, Feb./Mar. 2022

## Computer Application in Mining

Time: 3 hrs.

Max. Marks: 100

*Note: Answer any FIVE full questions, choosing ONE full question from each module.*

### Module-1

- 1 a. Explain about the design process with Shigleg's design process. (10 Marks)  
b. Explain the key significance of using the CAD software. (10 Marks)

OR

- 2 a. Explain the working of Cathode Ray Tube with neat sketch. (10 Marks)  
b. Define input and output devices and explain any three types of input and output devices. (10 Marks)

### Module-2

- 3 a. Write about the conceptual method suggested by Foley and Van Dam with flow chart. (10 Marks)  
b. Explain about wire frame model with its advantages and disadvantages. (10 Marks)

OR

- 4 a. Explain all the different functions of a graphic package. (10 Marks)  
b. What is a solid model and explain its advantages and disadvantages. (10 Marks)

### Module-3

- 5 a. Write the algorithm for ultimate pit configuration. (10 Marks)  
b. Write the algorithm for Ore reserve estimation. (10 Marks)

OR

- 6 a. Write the algorithm for shovel dumper combination. (10 Marks)  
b. Write the algorithm for ventilation network analysis. (10 Marks)

### Module-4

- 7 a. Explain robotic with its applications in mines. (10 Marks)  
b. Explain what is remote controlled and manless mining with example. (10 Marks)

OR

- 8 a. Write a short on RDBMS with advantage and example. (10 Marks)  
b. Explain about the use of Dbase and Microsoft access. (10 Marks)

### Module-5

- 9 a. Describe about the AI application in mine environment. (10 Marks)  
b. Write a short note on computer aided blast application. (10 Marks)

OR

- 10 a. Describe about the computer application on mine design based on rock mechanics. (10 Marks)  
b. Write a short note on mine design computer application based on ground control like slope stability and pillar design. (10 Marks)

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