

# CBCS SCHEME



17MN82

Eighth Semester B.E. Degree Examination, July/August 2021

## Computer Application in Mining

3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

- 1 a. Discuss in detail, the design process of Computer Aided design. (10 Marks)  
b. Discuss in detail, the fundamentals of Computer Aided design. (10 Marks)
- 2 a. Explain the following :  
i) Stroke writing      ii) Raster Scan      iii) Colour and Animation. (10 Marks)  
b. With neat sketch, explain Scanner and Printer. (10 Marks)
- 3 a. Discuss in detail, the three modules of graphic software. (10 Marks)  
b. Discuss the process of Constructing the geometry. (10 Marks)
- 4 a. Discuss in detail about Solid edge with its advantages and disadvantages. (10 Marks)  
b. Interpret the various applications of Computer in Mining Industries. (10 Marks)
- 5 a. Write an algorithm for Ore reserve estimation. (10 Marks)  
b. Write an algorithm for Bulk material handling equipment. (10 Marks)
- 6 a. Write an algorithm for Pillar design. (10 Marks)  
b. Write an algorithm for Blast design. (10 Marks)
- 7 a. Explain Database Management System administrators. (10 Marks)  
b. Explain the uses of Database Management System. (10 Marks)
- 8 a. Discuss about the types of attributes. (15 Marks)  
b. Draw an ER diagram for Bank database. (05 Marks)
- 9 a. Explain the following : i) Select operation    ii) Project operation  
iii) Rename operation    iv) Relational Algebra operation    v) Cartesian product. (10 Marks)  
b. Consider the following schema and write the queries in relational algebra :  
EMPLOYEE (Name , SSN , Salary , Super\_ssn , Gender , Dno)  
DEPARTMENT (Dname , Dnumber , Mgr\_ssn)  
PROJECT (Pname, Pnumber , Plocation , Dnum)  
i) Retrieve name of employees who have no dependents.  
ii) List name of managers who have atleast one dependent. (10 Marks)
- 10 a. Consider the following schema and write the queries in SQL :  
EMPLOYEE (Name , SSN , Salary , Super\_ssn , Gender , Dno)  
DEPARTMENT (Dname , Dnumber , Mgr\_ssn)  
PROJECT (Pname, Pnumber , Plocation , Dnum)  
i) Retrieve the birth date and address of employees whose name is "John Smith".  
ii) Retrieve the name and address of all employees who works for 'Research' department. (10 Marks)  
b. Explain 1NF and 2NF with examples. (10 Marks)

\*\*\*\*\*

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and/or equations written eg, 42+8 = 50, will be treated as malpractice.