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Seventh Semester B.E. Degree Examination, June/July 2019
Computer Application in Mining

Time: 3 hrs.

Max. Marks:100

Note: Answer FIVE full questions, selecting atleast TWO questions from each part.

PART – A

- 1 a. Draw the flow chart of design process and computer-aided design process and explain geometric modeling and design review and evaluation. (10 Marks)
- b. List the fundamentals of CAD. Explain each in detail. (10 Marks)
- 2 a. With neat sketch, explain the Cathode Ray tube. (05 Marks)
- b. With sketch, explain the stroke writing. (05 Marks)
- c. With sketch, explain the Raster scan. (05 Marks)
- d. Write a note on colour and animation in CAD. (05 Marks)
- 3 a. Distinguish between wire frame and solid modeling in detail. (10 Marks)
- b. Write a detailed note on application of computers in mining industries. (10 Marks)
- 4 a. Write the algorithm for pit configuration. (10 Marks)
- b. Write the algorithm for ore reserve estimation. (10 Marks)

PART – B

- 5 a. Write the algorithm for ground vibration prediction. (10 Marks)
- b. Write the algorithm for Pillar design (10 Marks)
- 6 a. Distinguish between database approach Vs traditional file processing approach. (08 Marks)
- b. Draw the E-R diagram of a company. (12 Marks)
- 7 a. Define relational model. With examples explain its types. (10 Marks)
- b. I) Using unary relational operation, define select and project operation
II) Using SELECT operation find :
 - i) The employees whose salary is more than 10,000
 - ii) Find the employees whose works for department 3 and whose salary is more than 50,000 using PROJECT operation.
 - ii.a. Find the name and salary of all employees
 - ii.b. Print the project name and their location
 - ii.c. Retrieve the name and salary of all employees working for department. (10 Marks)
- 8 a. Define normalization with examples explain 1NF and 2NF. (10 Marks)
- b. Consider the following schema
Sailor (Sid, Sname, rating, age)
Reserves (Sid, boatid, day)
Boats (boatid, boatname, colour)
Using the above schema solve the queries in SQL.
 - i) Find the names of sailor who have reserved all boats called "Interlake"
 - ii) Find the Sid's of all sailors with age over 20, who have not reserved a red boat
 - iii) Find the names of sailors, who have reserved atleast 2 boats. (10 Marks)

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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.