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10MN73

**Seventh Semester B.E. Degree Examination, Dec.2018/Jan.2019**  
**Computer Application in Mining**

Time: 3 hrs.

Max. Marks:100

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

PART - A

- 1 a. Explain in detail about the fundamentals of CAD. (10 Marks)  
b. Explain in detail about the design process. (10 Marks)
- 2 a. With a neat sketch, explain the working principle of Cathode Ray tube. (10 Marks)  
b. Explain in detail about the colour and animation in Computer Graphics. (10 Marks)
- 3 a. Discuss in detail about the Applications of Computer in Mining Industries. (10 Marks)  
b. Distinguish between Wire frame and solid modelling. (10 Marks)
- 4 a. Write an algorithm of ultimate Pit Configuration. (10 Marks)  
b. Write an algorithm of Ore reserve estimation. (10 Marks)

PART - B

- 5 a. Write an algorithm of Ground vibration. (10 Marks)  
b. Write an algorithm of Ventilation Network Analysis. (10 Marks)
- 6 a. Differentiate between Database Approach and Traditional file Approach. (10 Marks)  
b. With a sketch, explain the three schema architecture. (10 Marks)
- 7 a. Define the following with an examples each : (10 Marks)  
i) Select ii) Project iii) Union operators iv) Set difference v) Cartesian Product.  
b. Define the following : (05 Marks)  
i) Relational model ii) Domain iii) Attribute iv) Relational schema.  
c. Retrieve the names of the manager of each department : (05 Marks)  
i) Without join Operator ii) With join operator.
- 8 a. Define Normalization , 1NF , 2NF and 3NF. (08 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 quarries in SQL.  
i) Find the names of sailors who have reserved all boats called 'Interlake'.  
ii) Find the Sid's of all sailors, with age > 20 who have not reserved a red boat.  
iii) Find the names of sailors, who have reserved atleast 2 boats. (12 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.