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| **APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**FOURTHSEMESTER B.TECH DEGREE EXAMINATION, APRIL 2018 |
| **Course Code: CS208** |
| **Course Name:PRINCIPLES OF DATABASE DESIGN** |
| **Scheme of Valuation/Answer Key** |
| (Scheme of evaluation (marks in brackets) and answersof problems/key) |
| **PART A** |
|  |  | ***Answer all questions, each carries 3 marks.*** | Marks |
| 1 |  | Any three responsibilities.Each carries one mark | (1+1+1) |
| 2 |  | Example +Explanation for Unary | (1.5) |
| Example +Explanation for Binary | (1.5) |
| 3 |  | Relation Schema | (3) |
| 4 |  | Number of tuples | (1.5) |
| Two relational algebra expressions. | (1.5) |
| **PART B** |
|  ***Answer any two full questions, each carries 9 marks*** |
| 5 | a) | Explanation for Physical data independences(1.5)+ real world example(1) | (2.5) |
| Explanation for Logical data independences(1.5)+ real world example(1) | (2.5) |
| b) | Explanation(2)+ER Diagram(2) | (2+2) |
| 6 |  | Each query carries 3 marks. | (3+3+3) |
| 7 | (a) | Primary Key(2)+Foreign Key (2) | (2+2) |
| (b) | ER diagram (5) | (5) |
| **PART C** |
| ***Answer all questions, each carries 3 marks.*** |
| 8 |  | Illustration of Update(1.5)+Illustration of Delete(1.5) | 1.5+1.5 |
| 9 |  | Explanation | 3 |
| 10 |  | Definition for Superkey(1)+Example(0.5)+Definition for Minimal Superkey(1)+Example(0.5) | 1.5+1.5 |
| 11 |  | {D}+ (1.5) + {EF}+ (1.5) | 1.5+1.5 |
| **PART D** |
| ***Answer any twofull questions, each carries9 marks.*** |
| 12 |  | Each Expression carries 3 marks | 3+3+3 |
| 13 |  | Decomposition  | 9 |
| 14 | a) | 2marks for first two schema.1mark for last schema | 2+2+1 |
|  | b) | Reason(2)+solution(2) | 2+2 |
| **PART D** |
| ***Answer any four full questions, each carries 10 marks.*** |
| 15 | a) | Each Definition carry 1 marks | 1+1+1 |
|  | b) | Block access for single level(3.5)+Block access for multi level(3.5) | 3.5+3.5 |
| 16 | a) | Any two difference | 1.5+1.5 |
|  | b) | Structure of Btree(1.5)+structure of B+tree(1.5)+any two Difference(2) | 1.5+1.5+2 |
|  | c) | Query tree | (2) |
| 17 | a) | Query Tree(3)+Optimization(7) | (3+7) |
| 18 | a) | Explanation  | (4) |
|  | b) | Dirty read(3)+Lost Update(3) | (3+3) |
| 19 | a) | Explanation | (2) |
|  | b) | Explanation (3)+Example(2) | (3+2) |
|  | c) | Explanation | (3) |
| 20 | a) | Rdf document(1)+Graph Structure(2) | (1+2) |
|  | b) | Explanation | (4) |
|  | c) | Any three features .Each carries 1 marks | (1+1+1) |
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