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| **Question NO** | **Question Statement** | **Level of mapping and Number** | | | **Blooms Level** | **Marks** |
| CO | PO | PSO |
| Q1 | Explain the basic concept of hashing. | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 2 | 2 |
| Q2 | Explain hash table and hash function with suitable example. | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 2 | 4 |
| Q3 | Identify difference between open and closed hashing techniques. | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 2 | 4 |
| Q4 | Describe the perfect hash function. | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 2 | 2 |
| Q5 | Describe is collision in hashing? Describe various collision resolution techniques. | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 2 | 4 |
| Q6 | Explain the terms related to hashing:  i)Load factor  ii)Load Density | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 2 | 4 |
| Q7 | Discuss the issues involved in Hashing. | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 2 | 4 |
| Q8 | Explain the term rehashing. | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 6 | 2 |
| Q9 | Explain different hashing functions. | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 2 | 4 |
| Q10 | What are the properties of good hashing function? | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 3 | 4 |
| Q11 | Describe extendible Hashing technique. | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 3 | 4 |
| Q12 | Discuss hash Table overflow. | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 2 | 2 |
| Q13 | Write short note on Skip List. | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 2 | 2 |
| Q14 | Discuss the various operations that can be performed on Skip List | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 2 | 4 |
| Q15 | Write short note on Dictionary and ADT for the same. | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 2 | 4 |
| Q16 | Describe the ordered dictionaries. | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 2 | 4 |
| Q17 | What is bucket hashing ? Explain with example. | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 2 | 4 |
| Q18 | What is hash function? Explain the following hash  functions :  i)Mid-square  ii)Modulo Division  iii)Folding Method  iv)Digit Analysis. | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 2 | 8 |
| Q19 | What is collision? Explain any two methods of handling collision | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 2 | 6 |
| Q20 | What is hash function? What are issues in hashing? What are rules for designing hash function? Give types of uniform hash functions. | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 2 | 6 |
| Q21 | What is hash function? Explain the different types of hash functions. | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 2 | 6 |
| Q22 | What are hashing methods? Explain in brief. | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 2 | 6 |
| Q23 | Insert the following data in hash table of size 10 using linear probing with chaining with replacement.  Here, h(x)=x%10  21,35,31,37,32,33,48 | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 3 | 4 |
| Q24 | Identify hash functions to calculate the hash values of the data. | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 2 | 3 |
| Q25 | Assume the size of hash table as 8.The hash function to be used to calculate hash value of the data X is X%8.Insert the following values in hash table : 10,12,20,18,15.Use linear probing without replacement for handling collision. | CO3 | PO1-3  PO2-2  PO3-2  PO4-2  PO5-3  PO12-3 |  | 3 | 3 |
| **Blooms level no** | **Blooms Taxonomy terms** | | | | | |
| **6** | **Description: Image result for bloom's taxonomy** | | | | | |
| **5** |
| **4** |
| **3** |
| **2** |
| **1** |

**Note:**

**1. Example demonstrate the method for filling the data**

**2. Blooms Taxonomy is provided for Ready Reference**

**Subject In-charge HOD**