((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	A hash table of length 10 uses open addressing with hash function $h(k)=k \bmod 10$, and linear probing. After inserting 6 values into an empty hash table, the table

0	
1	
2	42
3	23
4	34
5	52
6	46
7	33
8	
9	

is as shown below.   Which one of the following choices gives a possible order in which the key values could have been inserted in the table? |
((OPTION_A)) THIS IS MANDATORY OPTION	46,42,34,52,23,33
((OPTION_B)) THIS IS ALSO MANDATORY OPTION	34,42,23,52,33,46
((OPTION_C)) This is optional	46,34,42,23,52,33
((OPTION_D)) This is optional	42,46,33,23,34,52
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or	C

E	
((EXPLANATION)) This is also optional	The sequence (A) doesn't create the hash table as the element 52 appears before 23 in this sequence. The sequence (B) doesn't create the hash table as the element 33 appears before 46 in this sequence. The sequence (C) creates the hash table as 42, 23 and 34 appear before 52 and 33, and 46 appears before 33. The sequence (D) doesn't create the hash table as the element 33 appears before 23 in this sequence.

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	How many different insertion sequences of the key values using 	0		 	1		 	2	42	 	3	23	 	4	34	 	5	52	 	6	46	 	7	33	 	8		 	9		 the same hash function h(k)=k mod 10 and linear probing will result in the hash table shown above?
((OPTION_A)) THIS IS MANDATORY OPTION	10
((OPTION_B)) THIS IS ALSO MANDATORY OPTION	20
((OPTION_C)) This is optional	30
((OPTION_D)) This is optional	40
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	

((CORRECT_CHOICE)) Either A or B or C or D or E	C
((EXPLANATION)) This is also optional	In a valid insertion sequence, the elements 42, 23 and 34 must appear before 52 and 33, and 46 must appear before 33. Total number of different sequences = **3! x 5** = 30 In the above expression, **3!** is for elements 42, 23 and 34 as they can appear in any order, and **5** is for element 46 as it can appear at 5 different places

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	The keys 12, 18, 13, 2, 3, 23, 5 and 15 are inserted into an initially empty hash table of length 10 using open addressing with hash function h(k) = k mod 10 and linear probing. What is the resultant hash table?
((OPTION_A)) THIS IS MANDATORY OPTION	A
((OPTION_B)) THIS IS ALSO MANDATORY OPTION	B
((OPTION_C))	C

This is optional	
((OPTION_D)) This is optional	D
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CH OICE)) Either A or B or C or D or E	C
((EXPLANATION)) This is also optional	Open addressing, or closed hashing, is a method of collision resolution in hash tables. With this method a hash collision is resolved by probing, or searching through alternate locations in the array (the probe sequence) until either the target record is found, or an unused array slot is found, which indicates that there is no such key in the table. Well known probe sequences include: *linear probing* in which the interval between probes is fixed--often at 1. *quadratic probing* in which the interval between probes increases linearly (hence, the indices are described by a quadratic function). *double hashing* in which the interval between probes is fixed for each record but is computed by another hash function.

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	Consider a hash table of size seven, with starting index zero, and a hash function $(3x + 4) \mod 7$. Assuming the hash table is initially empty, which of the following is the contents of the table when the sequence 1, 3, 8, 10 is inserted into the table using closed hashing? Note that '_' denotes an empty location in the table.
((OPTION_A)) THIS IS MANDATORY OPTION	8, _, _, _, _, _, 10
((OPTION_B))	1, 8, 10, _, _, _, 3

THIS IS ALSO MANDATORY OPTION	
((OPTION_C)) This is optional	1, _, _, _, _, _,3
((OPTION_D)) This is optional	1, 10, 8, _, _, _, 3
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CH OICE)) Either A or B or C or D or E	B

((EXPLANATION)) This is also optional	let us put values 1, 3, 8, 10 in the hash of size 7. Initially, hash table is empty
	
	`-    -    -    -    -    -    -`
	`0    1    2    3    4    5    6`
	
	The value of function (3x + 4)mod 7 for 1 is 0, so let us put the value at 0
	
	`1    -    -    -    -    -    -`
	`0    1    2    3    4    5    6`
	
	The value of function (3x + 4)mod 7 for 3 is 6, so let us put the value at 6
	
	`1    -    -    -    -    -    3`
	`0    1    2    3    4    5    6`
	
	The value of function (3x + 4)mod 7 for 8 is 0, but 0 is already occupied, let us put the value(8) at next available space(1)
	
	`1    8    -    -    -    -    3`
	`0    1    2    3    4    5    6`
	
	The value of function (3x + 4)mod 7 for 10 is 6, but 6 is already occupied, let us put the value(10) at next available space(2)
	
	`1    8    10   -    -    -    3`
	`0    1    2    3    4    5    6`

((MARKS))	1

QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	Given the following input (4322, 1334, 1471, 9679, 1989, 6171, 6173, 4199) and the hash function x mod 10, which of the following statements are true? i. 9679, 1989, 4199 hash to the same value ii. 1471, 6171 has to the same value iii. All elements hash to the same value iv. Each element hashes to a different value
((OPTION_A)) THIS IS MANDATORY OPTION	I only
((OPTION_B)) THIS IS ALSO MANDATORY OPTION	Ii only
((OPTION_C)) This is optional	I and ii only
((OPTION_D)) This is optional	Iii or iv
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or E	C
((EXPLANATION)) This is also optional	Hash function given is mod(10). 9679, 1989 and 4199 all these give same hash value i.e 9 1471 and 6171 give hash value 1

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	Consider a hash table with 100 slots. Collisions are resolved using chaining. Assuming simple uniform hashing, what is the probability that the first 3 slots are unfilled after the first 3 insertions?
((OPTION_A)) THIS IS MANDATORY OPTION	$(97 \times 97 \times 97)/100^3$
((OPTION_B)) THIS IS ALSO MANDATORY OPTION	$(99 \times 98 \times 97)/100^3$
((OPTION_C)) This is optional	$(97 \times 96 \times 95)/100^3$
((OPTION_D)) This is optional	$(97 \times 96 \times 95)/(3! \times 100^3)$
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or E	A
((EXPLANATION)) This is also optional	Simple Uniform hashing function is a hypothetical hashing function that evenly distributes items into the slots of a hash table. Moreover, each item to be hashed has an equal probability of being placed into a slot, regardless of the other elements already placed.

```
Probability that the first 3 slots are unfilled after the first 3
insertions =

            (probability that first item doesn't go in any of the
first 3 slots)*
```

<table>
<tr><td></td><td>(probability that second item doesn't go in any of the first 3 slots)*

(probability that third item doesn't go in any of the first 3 slots)

= (97/100) * (97/100) * (97/100)</td></tr>
</table>

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	Which one of the following hash functions on integers will distribute keys most uniformly over 10 buckets numbered 0 to 9 for i ranging from 0 to 2020?
((OPTION_A)) THIS IS MANDATORY OPTION	$h(i) = i^2$ mod 10
((OPTION_B)) THIS IS ALSO MANDATORY OPTION	$h(i) = i^3$ mod 10
((OPTION_C)) This is optional	$h(i) = (11 * i^2)$ mod 10
((OPTION_D)) This is optional	$h(i) = (12 * i)$ mod 10
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	

((CORRECT_CHOICE)) Either A or B or C or D or E	B
((EXPLANATION)) This is also optional	Since mod 10 is used, the last digit matters. If you do cube all numbers from 0 to 9, you get following

Number	Cube	Last Digit in Cube
0	0	0
1	1	1
2	8	8
3	27	7
4	64	4
5	125	5
6	216	6
7	343	3
8	512	2
9	729	9

Therefore all numbers from 0 to 2020 are equally divided in 10 buckets. If we make a table for square, we don't get equal distribution. In the following table. 1, 4, 6 and 9 are repeated, so these buckets would have more entries and buckets 2, 3, 7 and 8 would be empty.

Number	Square	Last Digit in Cube
0	0	0
1	1	1
2	4	4
3	9	9
4	16	6
5	25	5
6	36	6
7	49	9
8	64	4
9	81	1

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER	Given a hash table T with 25 slots that stores 2000 elements, the load factor α for T is _____

CONTENT. QTN CAN HAVE IMAGES ALSO	
((OPTION_A)) THIS IS MANDATORY OPTION	80
((OPTION_B)) THIS IS ALSO MANDATORY OPTION	0.0125
((OPTION_C)) This is optional	8000
((OPTION_D)) This is optional	1.25
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or E	A
((EXPLANATION)) This is also optional	load factor = (no. of elements) / (no. of table slots) = 2000/25 = 80

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER	Which of the following statement(s) is TRUE? 1. A hash function takes a message of arbitrary length and generates a fixed length code. 2. A hash function takes a message of fixed length and generates a code of

CONTENT. QTN CAN HAVE IMAGES ALSO	variable length. 3. A hash function may give the same hash value for distinct messages
((OPTION_A)) THIS IS MANDATORY OPTION	I only
((OPTION_B)) THIS IS ALSO MANDATORY OPTION	Ii and iii only
((OPTION_C)) This is optional	I and iii only
((OPTION_D)) This is optional	Ii only
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or E	C
((EXPLANATION)) This is also optional	Hash function is defined as any function that can be used to map data of arbitrary size of data to a fixed size data.. The values returned by a hash function are called hash values, hash codes, digests, or simply hashes : Statement 1 is correct Yes, it is possible that a Hash Function maps a value to a same location in the memmory that's why collision occurs and we have different technique to handle this problem : Statement 3 is coorect. eg : we have hash function, h(x) = x mod 3 Acc to Statement 1, no matter what the value of 'x' is h(x) results in a fixed mapping location. Acc. to Statement 3, h(x) can result in same mapping mapping location for different value of 'x' e.g. if x = 4 or x = 7 , h(x) = 1 in both the cases, although collision occurs.

((MARKS)) QUESTION IS OF	1

HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	Consider a hash function that distributes keys uniformly. The hash table size is 20. After hashing of how many keys will the probability that any new key hashed collides with an existing one exceed 0.5.
((OPTION_A)) THIS IS MANDATORY OPTION	5
((OPTION_B)) THIS IS ALSO MANDATORY OPTION	6
((OPTION_C)) This is optional	7
((OPTION_D)) This is optional	10
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or E	D
((EXPLANATION)) This is also optional	For each entry probability of collision is 1/20 {as possible total spaces =20, and an entry will go into only 1 place} Say after inserting x values probability becomes ½ $\square$ (1/20).x = ½ $\square$ X=10

((MARKS))	1

QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	Process of finding some other position when hash address is occupied is classified as
((OPTION_A)) THIS IS MANDATORY OPTION	collision resolution
((OPTION_B)) THIS IS ALSO MANDATORY OPTION	address space resolution
((OPTION_C)) This is optional	multiple hashing resolution
((OPTION_D)) This is optional	chaining resolution
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or E	A
((EXPLANATION)) This is also optional	

| ((MARKS)) | 1 |

QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	We have a hash table of size 7 to store integer keys, with hash function h(x) = x mod 7. If we use linear probing and insert elements in the order 1, 15, 14, 3, 9, 5, 27,in which bucket 9 will be placed?
((OPTION_A)) THIS IS MANDATORY OPTION	3
((OPTION_B)) THIS IS ALSO MANDATORY OPTION	4
((OPTION_C)) This is optional	2
((OPTION_D)) This is optional	5
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or E	B
((EXPLANATION)) This is also optional	Index key 0 14 1 1 2 15 3 3 4 9

	5 5
	6 27
	Collision occurred for 9 at 2 index, so we tried to find next available bucket i.e. 4

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	1. What causes a collision?
((OPTION_A)) THIS IS MANDATORY OPTION	The program you are running crashes
((OPTION_B)) THIS IS ALSO MANDATORY OPTION	There are too many hash keys in the array
((OPTION_C)) This is optional	Two hash keys are the same
((OPTION_D)) This is optional	The program is out of memory
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or	C

E	
((EXPLANATION)) This is also optional	Collision is a situation when two keys demand for same location .i.e their hash address is same

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	What are the three types of collision solutions?
((OPTION_A)) THIS IS MANDATORY OPTION	Overflow, underflow and undertow
((OPTION_B)) THIS IS ALSO MANDATORY OPTION	Chaining, rehashing and probing
((OPTION_C)) This is optional	Probing, underflow and chaining
((OPTION_D)) This is optional	None
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or	B

E	
((EXPLANATION)) This is also optional	

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	Hash function used to map several dictionary entry in hash table .Each position is called as
((OPTION_A)) THIS IS MANDATORY OPTION	Bucket
((OPTION_B)) THIS IS ALSO MANDATORY OPTION	Probe
((OPTION_C)) This is optional	Synonym
((OPTION_D)) This is optional	None
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or	A

E	
((EXPLANATION)) This is also optional	Hash table is partitioned into different buckets

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	If hash function is hash(x)=x mod 10 then 21,101,121,151 are ---- of each other.
((OPTION_A)) THIS IS MANDATORY OPTION	Load factor
((OPTION_B)) THIS IS ALSO MANDATORY OPTION	Synonym
((OPTION_C)) This is optional	Both a and b
((OPTION_D)) This is optional	None
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or	B

E	
((EXPLANATION)) This is also optional	

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1

((QUESTION))
 	
ENTER CONTENT. QTN CAN HAVE IMAGES ALSO
	Which of below is type of hash function
	
	    1.Division
	    2.Bit extraction
	    3.Folding
	    4. Linear probing
	    5.Chaining
	    6.Rehashing

((OPTION_A)) THIS IS MANDATORY OPTION	1,2 and 3
((OPTION_B)) THIS IS ALSO MANDATORY OPTION	All are correct
((OPTION_C)) This is optional	4,5 and 6
((OPTION_D)) This is optional	2,4 and 6
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	

((CORRECT_CHOICE)) Either A or B or C or D or E	A
((EXPLANATION)) This is also optional	Only first 3 are hash functions and rest are collision resolution strategy

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	For key 345678123 what will be index in fold shift and fold boundry respectively
((OPTION_A)) THIS IS MANDATORY OPTION	146 and 542
((OPTION_B)) THIS IS ALSO MANDATORY OPTION	641 and 245
((OPTION_C)) This is optional	542 and 146
((OPTION_D)) This is optional	678 and 876
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	

((CORRECT_CHOICE)) Either A or B or C or D or E	A
((EXPLANATION)) This is also optional	In fold shift, 345 678 123 345 +678 +123 --- 1146 discard 1 so index =146 In fold boundry, 543 +678 +321 --- 1542 discard 1 so index=542

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	Which of the below is rules for choosing hash function? 1. easy to compute 2. Less no of collision 3. Should not depend on every bit of the key 4. It should produce keys which will get distributed un uniformly
((OPTION_A)) THIS IS MANDATORY OPTION	1 and 2
((OPTION_B)) THIS IS ALSO MANDATORY	All of the above

OPTION	
((OPTION_C)) This is optional	3 and 4
((OPTION_D)) This is optional	None of the above
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CH OICE)) Either A or B or C or D or E	A
((EXPLANATION)) This is also optional	It should depend on every bit of key and should distribute keys uniformly over the table so 3 and 4 are not correct

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	Below is open hashing technique is collision resolution 1. Open addressing 2. Chaining 3. Rehashing 4. Double hashing
((OPTION_A)) THIS IS MANDATORY OPTION	1 only
((OPTION_B)) THIS IS ALSO MANDATORY	2 only

OPTION	
((OPTION_C)) This is optional	3 only
((OPTION_D)) This is optional	All of the above
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or E	B
((EXPLANATION)) This is also optional	In open hashing, collisions are stored outside the table And in closed hashing collisions are stored in same table at some other index

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	In quadratic probing with hash function hash(k)=k mod 10 , for keys 37,90,55,22,11,17,49,87 placed in hash table of size 10 ,what will be location of 87?
((OPTION_A)) THIS IS MANDATORY OPTION	7
((OPTION_B)) THIS IS ALSO MANDATORY	8

OPTION	
((OPTION_C)) This is optional	1
((OPTION_D)) This is optional	6
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or E	D
((EXPLANATION)) This is also optional	If collision situation , H(k)=(hash(k)+i^2) mod m

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	For keys : 37,90,45,22,17,49,55 placed in hash table of size 10, what will be location of 17?
((OPTION_A)) THIS IS MANDATORY OPTION	7
((OPTION_B)) THIS IS ALSO MANDATORY	4

OPTION	
((OPTION_C)) This is optional	1
((OPTION_D)) This is optional	2
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or E	C
((EXPLANATION)) This is also optional	In double hash in case of collision h2(key)=M-(key mod M) whatever 2nd hash index we generate, that many times need to move from home address here for 17 h1(17)=7 and h2(17)=4 i.e move 4 places from 7 so we get index 2 for storing 17

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	When we are using rehashing technique?
((OPTION_A)) THIS IS MANDATORY OPTION	When insertion fail due to overflow
((OPTION_B)) THIS IS ALSO	When table is almost filled and to avoid future failure in insertion operation

MANDATORY OPTION	
((OPTION_C)) This is optional	Both A and B
((OPTION_D)) This is optional	Only A
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or E	C
((EXPLANATION)) This is also optional	

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	For keys 50, 700, 76, 85, 92, 73, 101 stored in hash table with hash function =key mod 7 and chaining is used for resolving collision. Which of the below is part of same list?
((OPTION_A)) THIS IS MANDATORY OPTION	50,85
((OPTION_B)) THIS IS ALSO	50,85,92

MANDATORY OPTION	
((OPTION_C)) This is optional	73,101
((OPTION_D)) This is optional	Both B and C
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	None of the above
((CORRECT_CHOICE)) Either A or B or C or D or E	D
((EXPLANATION)) This is also optional	All synonyms are part of same link list in chaining

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	Dictionary consists of…… and is -----
((OPTION_A)) THIS IS MANDATORY OPTION	Pairs of <key,value>, of no specific order
((OPTION_B)) THIS IS ALSO	Keys,sorted

MANDATORY OPTION	
((OPTION_C)) This is optional	Pairs of<key,value>, sorted
((OPTION_D)) This is optional	None of the above
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or E	C
((EXPLANATION)) This is also optional	

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	Suppose you are given the following set of keys to insert into a hash table that holds exactly 11 values: 113 , 117 , 97 , 100 , 114 , 108 , 116 , 105 , 99 Which of the following best demonstrates the contents of the has table after all the keys have been inserted using linear probing?
((OPTION_A)) THIS IS MANDATORY OPTION	100, __, __, 113, 114, 105, 116, 117, 97, 108, 99
((OPTION_B)) THIS IS ALSO	99, 100, __, 113, 114, __, 116, 117, 105, 97, 108

MANDATORY OPTION	
((OPTION_C)) This is optional	100, 113, 117, 97, 14, 108, 116, 105, 99, __, __
((OPTION_D)) This is optional	117, 114, 108, 116, 105, 99, __, __, 97, 100, 113
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or E	B
((EXPLANATION)) This is also optional	Using modulo 11 arithmetic and linear probing gives these values

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	If total no of keys are 20 and hash table size is 40 then average no of comparisons of successful search in separate chaining is
((OPTION_A)) THIS IS MANDATORY OPTION	1.25
((OPTION_B)) THIS IS ALSO	0.5

MANDATORY OPTION	
((OPTION_C)) This is optional	0.25
((OPTION_D)) This is optional	2
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or E	A
((EXPLANATION)) This is also optional	Sn=1+(α/2) in chaining

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	What is average time complexity of searching in skip list?
((OPTION_A)) THIS IS MANDATORY OPTION	O(n)
((OPTION_B)) THIS IS ALSO	O(nlogn)

MANDATORY OPTION	
((OPTION_C)) This is optional	O(n/2)
((OPTION_D)) This is optional	O(log n)
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or E	D
((EXPLANATION)) This is also optional	

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	What is true in extensible hashing?
((OPTION_A)) THIS IS MANDATORY OPTION	Hash function uses key directly
((OPTION_B)) THIS IS ALSO	Hash function takes Binary representation

MANDATORY OPTION	
((OPTION_C)) This is optional	Trie is mapped to directory
((OPTION_D)) This is optional	All of the above
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	Only B and C
((CORRECT_CHOICE)) Either A or B or C or D or E	E
((EXPLANATION)) This is also optional	

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	What happens in case of overflow in extensible hashing,
((OPTION_A)) THIS IS MANDATORY OPTION	Buckets are splitted
((OPTION_B)) THIS IS ALSO	No of entries of Directory doesn't change

MANDATORY OPTION	
((OPTION_C)) This is optional	Directory is doubled
((OPTION_D)) This is optional	Both A and C
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or E	D
((EXPLANATION)) This is also optional	

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	Which of below technique have less no of collision?
((OPTION_A)) THIS IS MANDATORY OPTION	Linear probing
((OPTION_B)) THIS IS ALSO	Quadratic probing

MANDATORY OPTION	
((OPTION_C)) This is optional	Chaining
((OPTION_D)) This is optional	Both A and B
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or E	B
((EXPLANATION)) This is also optional	

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	Pair below 1. Linear probing a. H(key)=(Hash(key)+i)mod max) 2. Quadratic probing b. H(key)=(Hash(key)+i^2)mod max) 3. Double hashing c. table is resized whose size is prime number 4. Rehashing d.H2(key)=M-(key mod M) 5. Chaining e. Few table indices may leave empty
((OPTION_A)) THIS IS MANDATORY OPTION	1-a,2-b,3-c,4-d,5-e

((OPTION_B)) THIS IS ALSO MANDATORY OPTION	1-b,2-a,3-c,4-d,5-e
((OPTION_C)) This is optional	1-a,2-b,3-d,4-c,5-e
((OPTION_D)) This is optional	1-c,2-b,3-a,4-e,5-d
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or E	C
((EXPLANATION)) This is also optional	

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	Which of below is true? 1. Skip list are better than link list in searching 2. Quadratic probing have less number of collision compared to linear probing 3. Resizing is cheap operation
((OPTION_A)) THIS IS MANDATORY OPTION	I only

((OPTION_B)) THIS IS ALSO MANDATORY OPTION	I and ii only
((OPTION_C)) This is optional	All of the above
((OPTION_D)) This is optional	Only i and iii
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CH OICE)) Either A or B or C or D or E	B
((EXPLANATION)) This is also optional	

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	Which of the below stores data in sorted order?
((OPTION_A)) THIS IS MANDATORY OPTION	Hash table

((OPTION_B)) THIS IS ALSO MANDATORY OPTION	Dictionary
((OPTION_C)) This is optional	Skip list
((OPTION_D)) This is optional	Both B and C
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	All of the above
((CORRECT_CHOICE)) Either A or B or C or D or E	D
((EXPLANATION)) This is also optional	

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	Time complexity of perfect hash function in worst case is
((OPTION_A)) THIS IS MANDATORY OPTION	O(n)

((OPTION_B)) THIS IS ALSO MANDATORY OPTION	O(log n)
((OPTION_C)) This is optional	O(1)
((OPTION_D)) This is optional	O(n/2)
((OPTION_E)) This is optional. If optional keep empty so that system will skip this option	
((CORRECT_CHOICE)) Either A or B or C or D or E	C
((EXPLANATION)) This is also optional	

((MARKS)) QUESTION IS OF HOW MANY MARKS? (1 OR 2 OR 3 UPTO 10)	1
((QUESTION)) ENTER CONTENT. QTN CAN HAVE IMAGES ALSO	
((OPTION_A)) THIS IS MANDATORY OPTION	