

GATE 2024 CSE Daily Practice Questions

Question 1: Which one of the following sequences when stored in an array at locations $A[1], \dots, A[10]$ forms a max-heap?

- (A) 23, 17, 10, 6, 13, 14, 1, 5, 7, 12
- (B) 23, 17, 14, 7, 13, 10, 1, 5, 6, 12
- (C) 23, 17, 14, 6, 13, 10, 1, 5, 7, 15
- (D) 23, 14, 17, 1, 10, 13, 16, 12, 7, 5

Question 2: Which one or more of the following need to be saved on a context switch from one thread (T_1) of a process to another thread (T_2) of the same process?

- (A) Page table base register
- (B) Stack pointer
- (C) Program counter
- (D) General purpose registers

Question 3: Which one of the following kinds of derivation is used by LR parsers?

- (A) Leftmost
- (B) Leftmost in reverse
- (C) Rightmost

(D) Rightmost in reverse

Question 4: In 16-bit 2's complement representation, the decimal number -28 is:

(A) 1111 1111 0001 1100

(C) 1111 1111 1110 0100

(B) 0000 0000 1110 0100

(D) 1000 0000 1110 0100

Question 5: Consider a relation $R (A, B, C, D, E)$ with the following three functional dependencies.

$AB \rightarrow C$; $BC \rightarrow D$; $C \rightarrow E$;

The number of superkeys in the relation R is _____.