NAME :- KRUNAL RANK

ROLL NO :- U18CO081

CLASS :- BTECH 4TH YEAR

SEMESTER :- 7

DIVISION :- B

Software Engineering
Tutorial 7

Ans 1:

Stack:-

algebra stack;
introduces
sorts stack, item, bool, int, double
operations
stack: $\phi \rightarrow$ Stack
push: (stack, item) $\rightarrow$ stack
pop: (stack) $\rightarrow$ item + {underflow}
peek: stack $\rightarrow$ item + {novalue}
isEmpty: stack $\rightarrow$ bool
size: stack $\rightarrow$ int
constraints
stack, push, pop, peek, isEmpty, size
forall [s: stack, i: item]
isEmpty (stack()) = true
isEmpty (push(s, i)) = false
size (stack()) = 0
size (push(stack(), i)) = 1
pop(stack()) = {underflow}
pop (push(s, i)) = i
peek(stack()) = {novalue}
peek(push(stack(), i)) = i

Ans 2;

Software Verification	Software Validation
→ It includes checking documents, design, code and program.	→ Dynamic mechanism of testing & validating the actual product.
→ It doesn't also involve running the code.	→ It involves running the code.
→ Uses methods likes reviews, walkthroughs, inspections & disk checkings.	→ Uses methods like blackbox testing, whitebox testing, etc...
→ It needs to be confirmed whether the software is in agreement with specifications.	→ It needs to be confirmed whether the software is in agreement with customer requirements.
→ Finds bugs and issues early in the process.	→ Can find bugs and issues which verification cannot capture.

Ans 3; An inspection list is simply an assurance that a software product is inspected. It should be developed by a thorough discussion with experienced staff.
Some important faults that can be detected while inspecting code are:-

→ Data faults
→ Control faults
→ Input/Output faults
→ Interface faults
→ Storage management faults
→ Exception management faults.