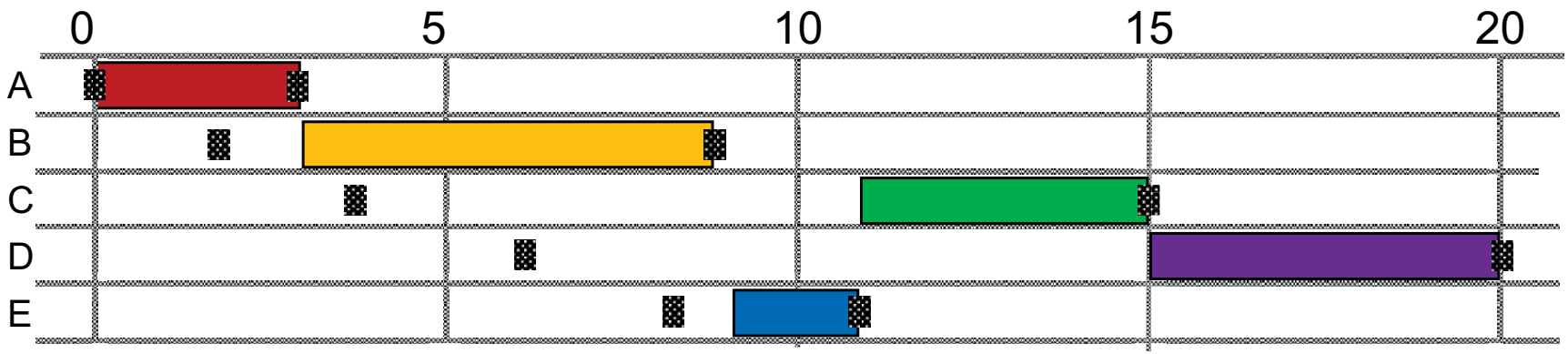
SPN

- The **Shortest Process Next** (SPN) policy always chooses the process which has the shortest expected running time.
- This policy is **non-pre-emptive**.
- The process with the shortest expected processing time is selected next (Shortest Job First – SJF)
- A short process will jump to the head of the queue

SPN - Example



Process	A	B	C	D	E	
Arrival Time	0	2	4	6	8	
Service Time (T_S)	3	6	4	5	2	Mean
SPN						
Finish Time	3	9	15	20	11	
Turnaround Time (T_r)	3	7	11	14	3	7.60
T_r/T_S	1.00	1.17	2.75	2.80	1.50	1.84

- This example assumes that the processor knows the service time before it runs the processes.

SPN - Performance

- Gives minimum average waiting time for a given set of processes.
- Possibility of starvation for longer processes
- Not suitable for time-sharing
  - No premption
- The same bad example as for FCFS applies: with a mixture of very long and very short processes, SPN can be **unfair to short processes**.

process	A	B	C	D
arrival time	0	1	2	3
service time	1	100	1	100
start time	0	1	101	102
finish time	1	101	102	202
turnaround time T_r	1	100	100	199
T_r/T_s	1.0	1.0	100	2.0