FACULTY OF ENGINEERING &TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY

- 3.This mixture is kept in a PCR equipment and is subjected to repeated cycles of DNA denaturation-renaturation-DNA replication.

- 4.During this process, the decaoligonucleotide will pair with the homologous sequence present at different locations in the DNA.

- 5.DNA replication extend the decaoligonucleotide and copy the sequence continuous with the sequence with which the selected oligonucleotide has paired.

- 6.The repeated cycles of denaturation-renaturation-DNA replication will amplify this sequence of DNA.

- 7.Amplification will takes place only of those regions of the genome that has the sequence complementary to the decaoligonucleotide at their both ends.

- 8. After several cycles of amplification the DNA is subjected to gel electrophoresis.

Initial denaturation at 94°C for 10 min.

↓

Denaturation at 94°C for 1 min. Annealing at 37-45°C for 1 min. Extension at 72°C for 1 min.

↓

Final extension at 72°C for 10 min.

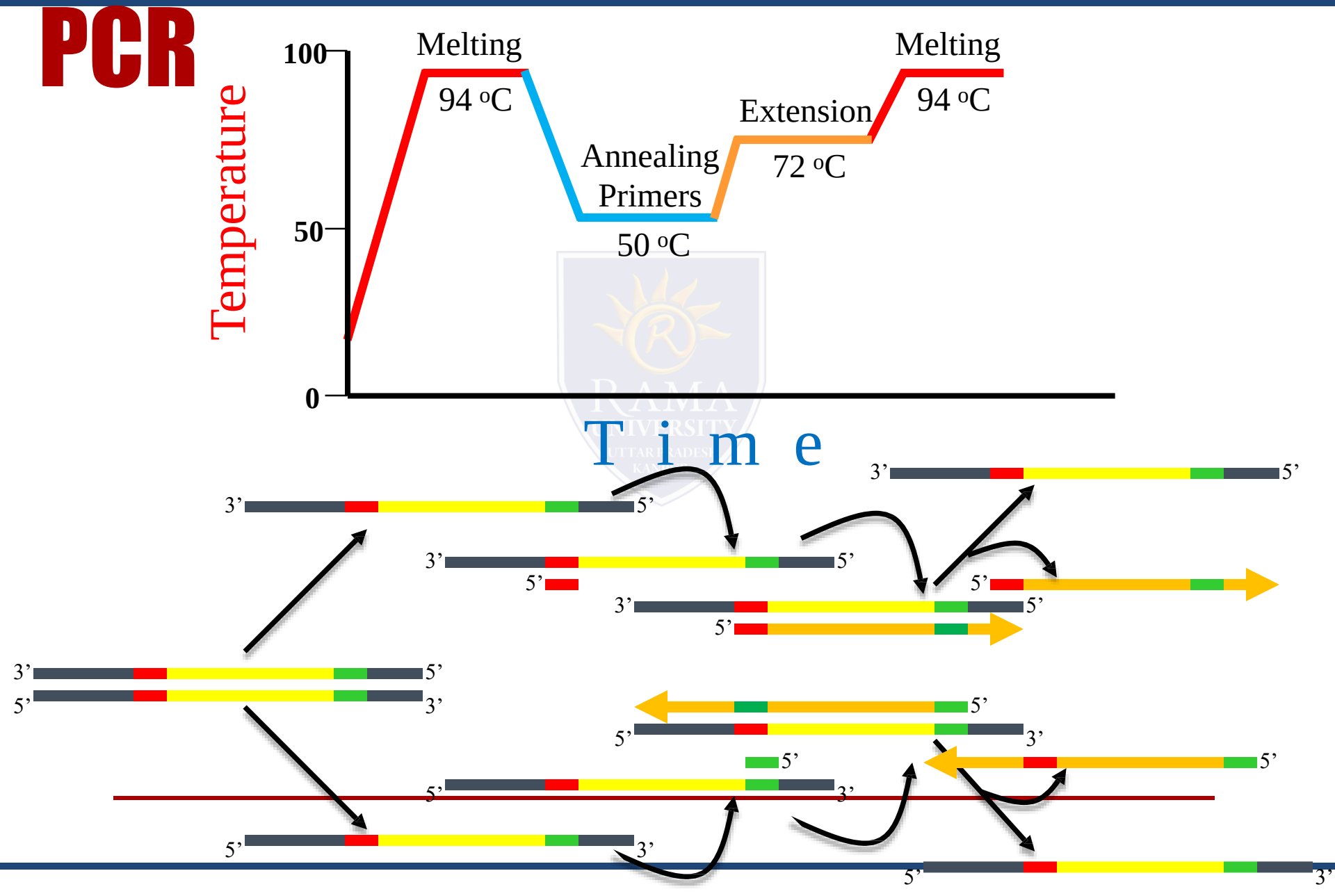
↓

Cooling at 4°C.

↓

- 9.The amplified DNA will form a distinct band. it is detected by ethidium bromide staining and visible fluorescence's under U.V. light

PCR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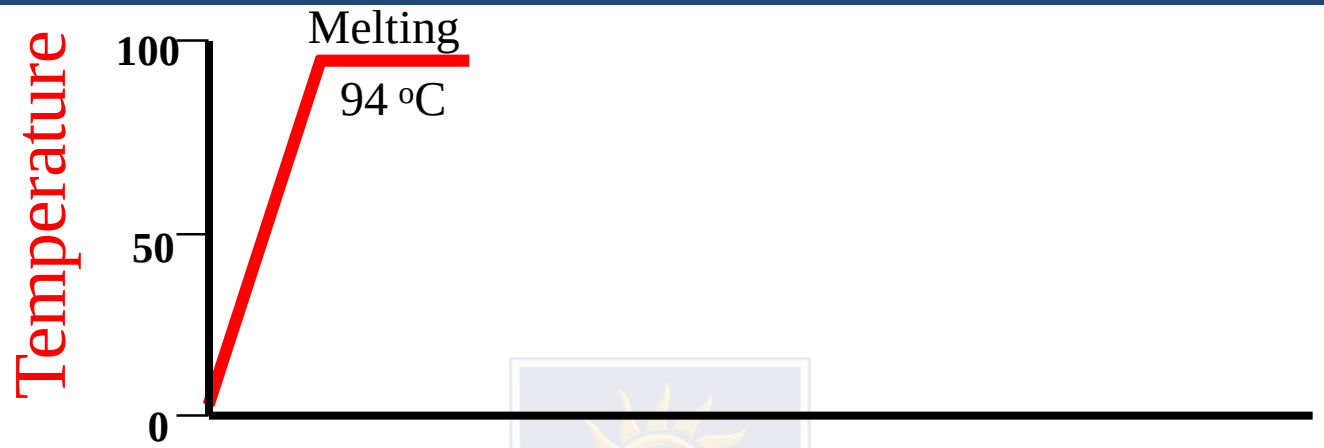
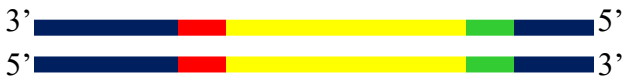
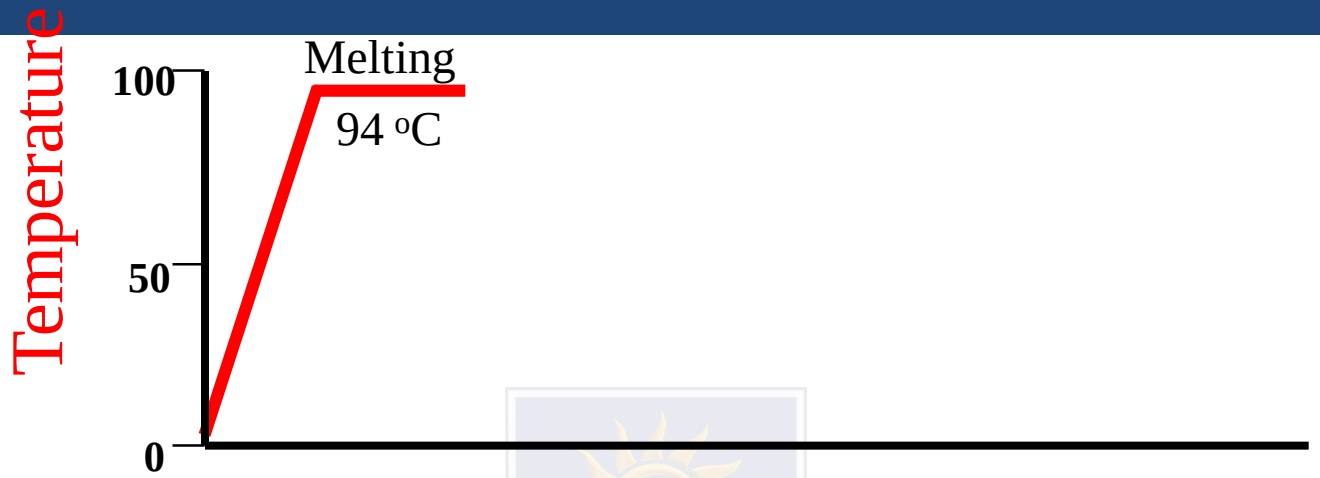
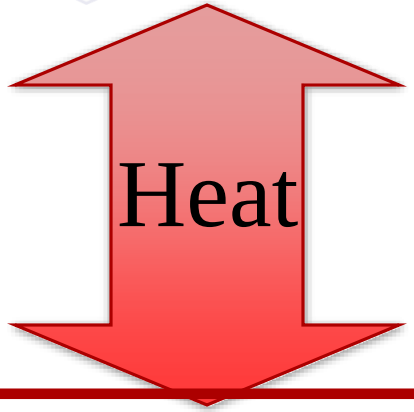
50
0
Melting
94 °C
Annealing
Primers
50 °C
Extension
72 °C
Melting
94 °C
Time
3'
5'



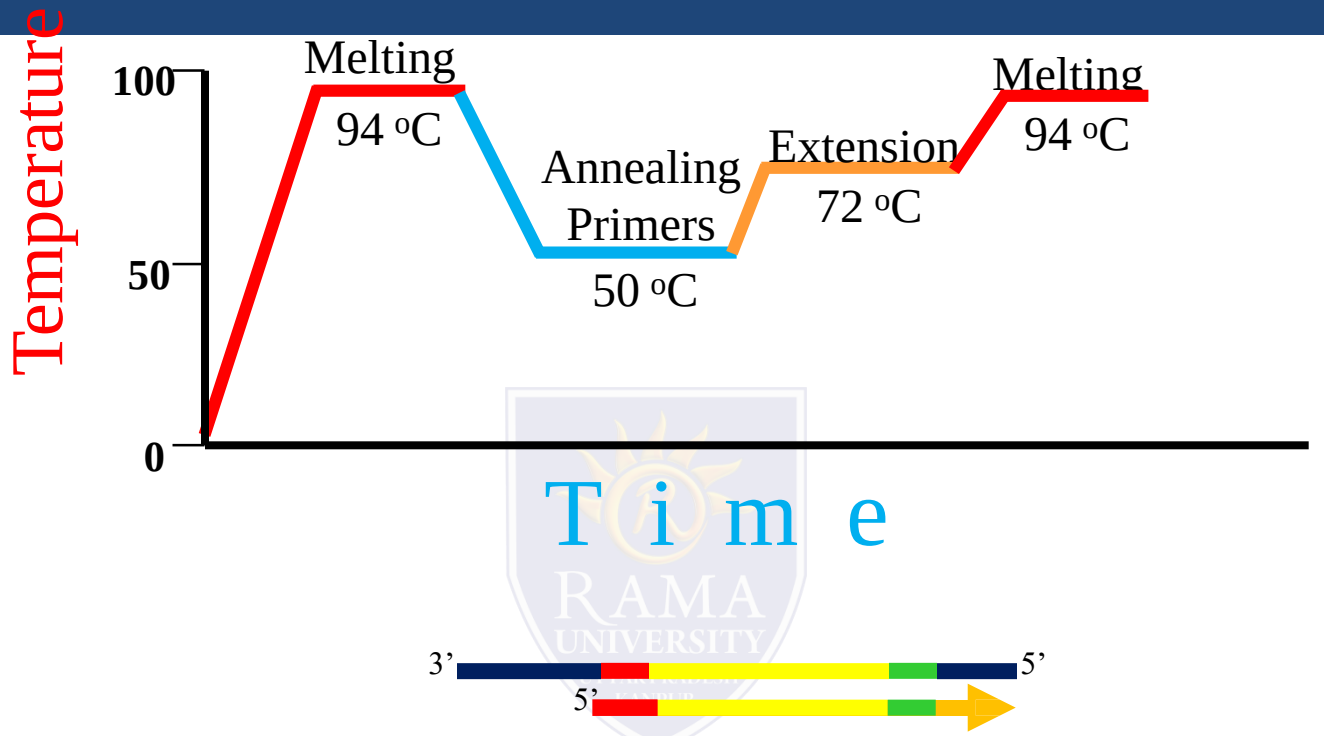


RAPD





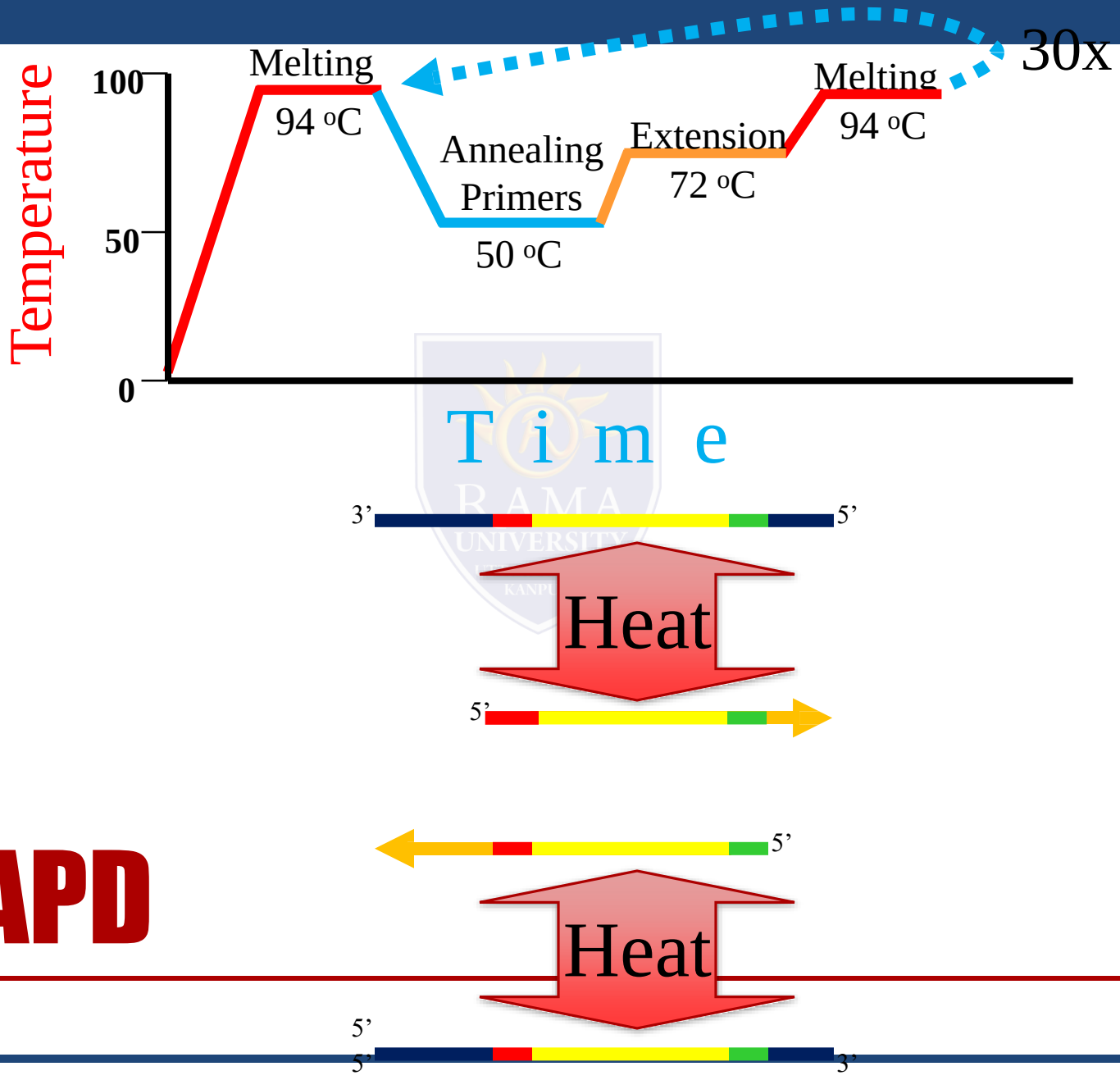
RAPD


Temperature
100
50
0
Melting
94 oC
Annealing
Primers
50 oC
Extension
72 oC
Melting
94 oC
T i m e

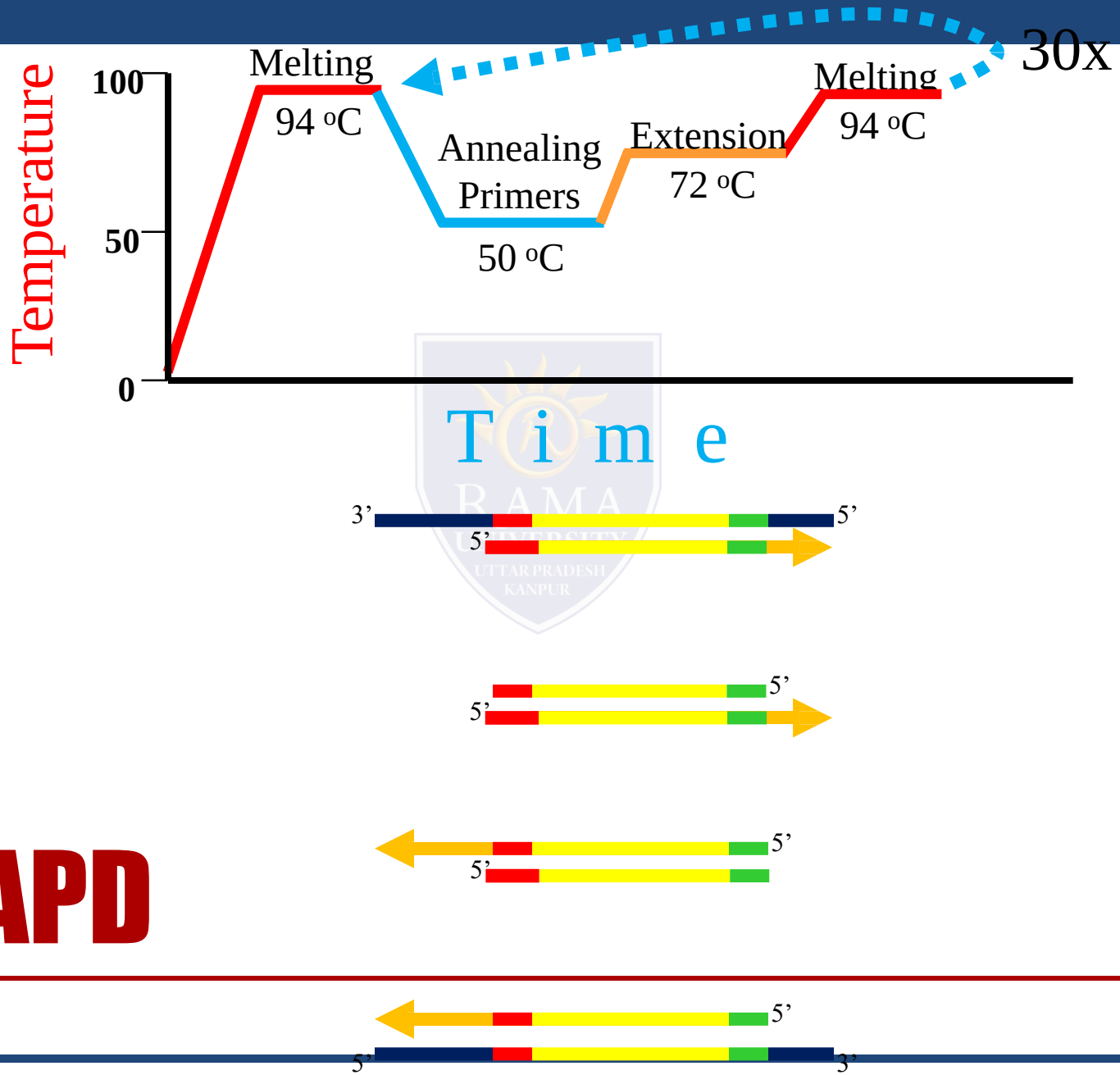
3’
5’
5’

RAPD


5’
5’
3’


30x
Temperature
100
50
0
Melting
94 oC
Annealing
Primers
50 oC
Extension
72 oC
Melting
94 oC
Time
3’
5’
Heat
5’
5’
Heat
5’
5’
3’

RAPD


30x
Melting
94 oC
Annealing
Primers
50 oC
Extension
72 oC
Melting
94 oC
Temperature
100
50
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Time
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RAPD