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Question 1:

Did Dobereiner's triads also exist in the columns of Newlands' Octaves? Compare and find out.

Answer 1:

Only one triad of Dobereiner's triads exists in the columns of Newlands' octaves. The triad formed by the elements Li, Na, and K of Dobereiner's triads also occurred in the columns of Newlands' octaves.

Dobereiner's triads

Li	*Ca*	*Cl*
Na	*Sr*	*Br*
K	*Ba*	*I*

Newlands' octaves

H	Li	Be	B	C	N	O
F	Na	Mg	Al	Si	P	S
Cl	K	Ca	Cr	Ti	Mn	Fe
Co and Ni	Cu	Zn	Y	In	As	Se
Br	Rb	Sr	Ce and La	Zr	–	–

Question 2:
What were the limitations of Dobereiner's classification?

Answer 2:
Limitation of Dobereiner's classification:

All known elements could not be classified into groups of triads on the basis of their properties.

Question 3:
What were the limitations of Newlands' Law of Octaves?

Answer 3:
Limitations of Newlands' law of octaves:

a) It was not applicable throughout the arrangements. It was applicable up to calcium only. The properties of the elements listed after calcium showed no resemblance to the properties of the elements above them.

b) Those elements that were discovered after Newlands' octaves did not follow the law of octaves.

c) The position of cobalt and nickel in the group of the elements (F, Cl) of different properties could not be explained.

d) Placing of iron far away from cobalt and nickel, which have similar properties as iron, could also not be explained.