Question 1: Which of the following will be the Linear Combination corresponding to \(\begin{pmatrix} -2 & 3 \ 5 & 1 \ end{pmatrix}\begin{pmatrix} x \ y \ end{pmatrix} \)?

- \(\begin{pmatrix} -2 \ 3 \ end{pmatrix} x + \begin{pmatrix} 5 \ 1 \ end{pmatrix} y \)
- \(\begin{pmatrix} 3 \ 1 \ end{pmatrix} x + \begin{pmatrix} -2 \ 5 \ end{pmatrix} y \)
- \(\begin{pmatrix} 5 \ 1 \ end{pmatrix} x + \begin{pmatrix} -2 \ 3 \ end{pmatrix} y \)
- ✓ \(\begin{pmatrix} -2 \ 5 \ end{pmatrix} x + \begin{pmatrix} 3 \ 1 \ end{pmatrix} y \)

Question 2: Gauss-Seidel method is also termed as a method of

- Elimination Method
- False Position Method
- ✓ Successive Displacement
- Iteration Method

Question 3: If \(v_1^r, v_2^r \) and \(v_3^r \) are in \(R^m \) then which of the following is equivalent to \(\begin{bmatrix} v_1 & v_2 & v_3 \ end{bmatrix}\begin{bmatrix} 2 \ -7 \ 5 \ end{bmatrix} \)

- ✓ \(2v_1^r - 7v_2^r + 5v_3^r \)
- \(5v_1^r - 7v_2^r + 2v_3^r \)
- \(5v_1^r + 2v_2^r - 7v_3^r \)
- \(2v_1^r + 5v_2^r - 7v_3^r \)

Question 4: If \(v_1^r = (2, 1), v_2^r = (3, 4) \) and \(v_3^r = (7, 8) \) then which of the following is true?

- ✓ $$ {v_1^r, v_2^r, v_3^r} $$ is linearly dependent.
- $$ {v_1^r, v_2^r, v_3^r} $$ is linearly independent.
- The vector equation has trivial solution.
- \(v_1^r = {2 over 3} v_2^r \)

Question 5: If \(A =\begin{bmatrix} 2 & 3 & 5 \ 0 & 3 & 6 \ 0 & 0 & 4 \ end{bmatrix} \), then which of the following is the value of det(A)?

- 6
- 18
- ✓ 24
- 36

Question 6: If T be a transformation, then which of the following is true for its linearity?

- $$ T(cu^r , gdv^r) = cT(u^r) gd T(v^r) ; ;;;; $$ whre 'c' and 'd' are scalars
- ✓ $$ T(cu^r + dv^r) = cT(u^r) + dT(v^r); ;;;; $$ whre 'c' and 'd' are scalars
- $$ T(cu^r × dv^r) = cT(u^r) × dT(v^r); ;;;; $$ whre 'c' and 'd' are scalars