1. f'_x — 3 points (2 for formula, 1 for value at the point), f'_y — 3 points, the rest — 4 points
2. Statement of IFT — 2 points. Each derivative — 4 points (3 for formula, 1 for calculations)
3. 4 points — first order (1 pt for each first derivative, 2 pt for final formula), 6 points — second order (1 pts for each second derivative, 3 pts for final formula)
4. Correct FOC — 2 points, Solution of FOC — 4 points. Check SOC — 4 points.
5. NDCQ — 1 pt, Correct FOC — 2 pts, Solution of FOC — 4 pts, check SOC — 3 pts.
6. Hesse matrix — 2 pts. Concavity and convexity — 5 pts. Considering particular value of a for strict concavity and strict convexity — 3 pts.
7. Point a. NDCQ — 2 pts. Writing FOC — 3 pts. Solving FOC — 5 pts. Checking SOC — 5 pts. Point b — 5 pts.
8. Point a. NDCQ — 1 pt. Writing FOC — 2 pts. Solving FOC — 4 pts. Checking SOC — 3 pts. Point b. Solution 1. Applying Envelope theorem to problem (A) — 5 pts, conclusion — 5 pts. Solution 2. Applying IFT to the FOC — 10 pts.