## Selected Exercises from Chapter 13

| Section <br> Number | Section Name | Pages in the Book | Exercises |
| :---: | :--- | :---: | :---: |
| 13.6 | DIRECTIONAL DERIVATIVES AND <br> GRADIENTS | $863-865$ | $1,5,9,11,15,19,25,29$, <br> $30,33,41,43,45,53,54$, <br> $57,72,75$ |

## Selected Exercises from Chapter 14

| Section <br> Number | Section Name | Pages in the Book | Exercises |
| :---: | :--- | :---: | :--- |
| 14.1 | DOUBLE INTEGRALS | $900-902$ | $4,5,11,15,24,25,26,29$ |
| 14.2 | DOUBLE INTEGRALS OVER <br> NONRECTANGULAR REGIONS | $908-910$ | $3,5,8,9,10,11,12,13$, <br> $15,16,21,23,25,29,30$, <br> $33,34,35,36,37,42,47$, <br> $53,54,55,56,59$ |
| 14.3 | DOUBLE INTEGRALS IN POLAR <br> COORDINATES | $916-917$ | $1,10,23,26,28,29,30,39$ |
| 14.4 | SURFACE AREA; PARAMETRIC <br> SURFACES | $927-930$ | $1,2,3,4,5,6$ <br> GeoGebra: <br> $11,12,33,34,35,36,37$, <br> 38 |
| 14.5 | TRIPLE INTEGRALS | $936-938$ | $1,3,5,7,15$ |
| 14.7 | CHANGE OF VARIABLES IN MULTIPLE <br> INTEGRALS; JACOBIANS | $957-959$ | $1,3,5,6,7,8,17,18,19$, <br> $20,21,22,23,24,31,33$ |

## Selected Exercises from Chapter 15

| Section <br> Number | Section Name | Pages in the Book | Exercises |
| :---: | :--- | :---: | :--- |
| 15.1 | VECTOR FIELDS | $978-979$ | $1,2,5,6,17,19$, |
| 15.2 | LINE INTEGRALS | $993-995$ | $7,9,13,19,20,23,25,33$, <br> 34,37 |
| 15.3 | INDEPENDENCE OF PATH; <br> CONSERVATIVE VECTOR FIELDS | $1004-1005$ | $1,2,3,6,7,9,11,15,23$, <br> 33 |
| 15.4 | GREEN'S THEOREM | $1011-1013$ | $1,3,4,7,8,9,21,22,29$ |

