Question 1

Correct

Mark 1.00 out of 1.00

Flag question

Evaluate $\oint_C (5z^4 - z^3 + 2)dz$ around a circle of $|z| = 1$

Select one:

- a. 0 ✓
- b. 1
- c. 2
- d. 3

The correct answer is: 0

Question 2

Correct

Mark 1.00 out of 1.00

Flag question

Evaluate $\int_c f(z)dz$ if $f(z) = y - x - 3x^2i$ where c consists of two line segments from $z = 0$ to $z = i$ and from $z = i$ to $z = i+1$

Select one:

- a. 1-i
- b. 1-i/2 ✓
- c. 1+i
- d. 1+i/2

The correct answer is: 1-i/2

Question 3

Correct

Mark 1.00 out of 1.00

Flag question

Evaluate $\int_c f(z)dz$ if $f(z)=\dfrac{z+2}{z}$ where c is a semi-circle and $z=2e^{i\theta}\ (\pi\le\theta\le 2\pi)$

Select one:

- a. $4+2\pi i$ ✓
- b. $4\pi i$
- c. $-4+2\pi i$
- d. $2\pi i$

The correct answer is: $4+2\pi i$

Question 4

Correct

Mark 1.00 out of 1.00

Flag question

Evaluate $\int_{(0,3)}^{(2,4)}\left[(2y+x^2)dx+(3x-y)dy\right]$ along the straight lines (0,3) to (2,3) and then from (2,3) to (2,4)

Select one:

- a. 33/2
- b. 3/2
- c. 103/6 ✓
- d. 97/6

The correct answer is: 103/6

Question 5

Correct

Mark 1.00 out of 1.00

Flag question

Evaluate $\oint_C (5z^4 - z^3 + 2)dz$ around the curve consisting of the parabolas $y = x^2$ from (0,0) to (1,1) and $y = x^2$ from (1,1) to (0,0)

Select one:

- a. 0 ✓
- b. 1
- c. 2
- d. 3

The correct answer is: 0

Question 6

Correct

Mark 1.00 out of 1.00

Flag question

Evaluate $\int_c f(z)dz$ if $f(z)=\dfrac{z+2}{z}$ where c is a semi-circle and $z=2e^{i\theta}$ $(0\le\theta\le\pi)$

Select one:

a. $4+2\pi i$

b. $4\pi i$

c. $-4+2\pi i$

d. $2\pi i$

The correct answer is: $-4+2\pi i$

Question 7

Correct

Mark 1.00 out of 1.00

Flag question

Evaluate $\int_c f(z)dz$ if $f(z)=\dfrac{z+2}{z}$ where c is a circle and $z=2e^{i\theta}\ (-\pi\le\theta\le\pi)$

Select one:

a. $4+2\pi i$

b. $4\pi i$

c. $-4+2\pi i$

d. $2\pi i$

The correct answer is: $4\pi i$

Question 8

Correct

Mark 1.00 out of 1.00

Flag question

Evaluate $\oint_C \frac{e^{3z}}{z-\pi i}$ where c is $|z-1|=4$

Select one:

a. $2\pi i$

b. $-2\pi i$ ✓

c. 0

d. $4\pi i$

The correct answer is: $-2\pi i$

Question 9

Correct

Mark 1.00 out of 1.00

Flag question

Evaluate $\int_c f(z)dz$ if $f(z) = y - x - 3x^2i$ where c is the line segment from $z=0$ to $z=1+i$

Select one:

- a. 1-i ✓
- b. 1-i/2
- c. 1+i
- d. 1+i/2

The correct answer is: 1-i

Question 10

Correct

Mark 1.00 out of 1.00

Flag question

Evaluate $\oint_C (5z^4 - z^3 + 2)dz$ around the square with vertices (0,0), (0,1), (1,1) and (1,0)

Select one:

- a. 0 ✓
- b. 1
- c. 2
- d. 3

The correct answer is: 0

Question 11

Correct

Mark 1.00 out of 1.00

Flag question

Evaluate $\int_{(0,3)}^{(2,4)}\left[(2y+x^2)dx+(3x-y)dy\right]$ along a straight line from (0,3) and (2,4)

Select one:

- a. 33/2
- b. 3/2
- c. 103/6
- d. 97/6 ✓

The correct answer is: 97/6

Question 12

Correct

Mark 1.00 out of 1.00

Flag question

Evaluate $\int_{(0,3)}^{(2,4)}\left[(2y+x^2)dx+(3x-y)dy\right]$ along the parabola $x=2t, y=t^2+3$

Select one:

- a. 33/2 ✓
- b. 3/2
- c. 103/6
- d. 97/6

The correct answer is: 33/2