Unit 6 - Week - 05 - Infinite Series, Multiple Integrals

Assignment-5

The due date for submitting this assignment has passed. **Due on 2017-02-28, 23:59 IST.**
As per our records you have not submitted this assignment.

1) *The series* $\sum_{n=0}^{\infty}(\frac{1}{\sqrt{2}})^n$ *converges to* *1 point*

- 0
- $2+\sqrt{2}$
- $\frac{\sqrt{2}}{\sqrt{2}+1}$
- $\frac{1}{\sqrt{2}-1}$

No, the answer is incorrect.
Score: 0

Accepted Answers:
$2+\sqrt{2}$

2) *The series* $\sum_{n=0}^{\infty}\frac{n!}{1000^n}$ *diverges.* *1 point*

- *True*
- *False*

No, the answer is incorrect.
Score: 0

Accepted Answers:
True

3) *The series* $\sum_{n=1}^{\infty}\frac{(-1)^{n+1}}{\sqrt{n}}$ *is* *1 point*

- *converges to* 0
- *divergent*
- *absolutely convergent*
- *conditionally convergent*

No, the answer is incorrect.
Score: 0

Accepted Answers:
conditionally convergent

4) *The series* $\sum_{n=1}^{\infty}\frac{(-1)^{n-1}}{n^2+2n+1}$ *1 point*

- *converges to* $5/36$
- *divergent*

- *absolutely convergent*
- *conditionally convergent*

No, the answer is incorrect.
Score: 0

Accepted Answers:
absolutely convergent

5) *Maclaurin series of the function* $f(x) = x\cos\pi x$ *is* **1 point**

- $x - \frac{\pi^2x^3}{2!} + \frac{\pi^4x^5}{4!} - \frac{\pi^6x^7}{6!} + \ldots.$
- $x + \frac{\pi^2x^3}{2!} + \frac{\pi^4x^5}{4!} + \frac{\pi^6x^7}{6!} + \ldots.$
- $\pi x - \frac{\pi^2x^2}{2!} + \frac{\pi^4x^4}{4!} - \frac{\pi^6x^6}{6!} + \ldots.$
- $\pi x - \frac{\pi^3x^3}{2!} + \frac{\pi^5x^5}{4!} - \frac{\pi^7x^7}{6!} + \ldots.$

No, the answer is incorrect.
Score: 0

Accepted Answers:
$x - \frac{\pi^2x^3}{2!} + \frac{\pi^4x^5}{4!} - \frac{\pi^6x^7}{6!} + \ldots.$

6) *The value of the integration* $\int_0^{\pi}\int_x^{\pi}\frac{\sin y}{y}dydx$ *is* **1 point**

- 1
- -2
- 2
- *can not be determined*

No, the answer is incorrect.
Score: 0

Accepted Answers:
2

7) *Let* $A = \int_0^1\int_1^{e^x} dydx$. *Then after reversing the order of integration we get* **1 point**

- $A = \int_0^1\int_1^{e^x} dxdy$
- $A = \int_0^1\int_1^{e^y} dxdy$
- $A = \int_1^0\int_1^{lny} dxdy$
- $A = \int_1^e\int_{lny}^1 dxdy$

No, the answer is incorrect.
Score: 0

Accepted Answers:
$A = \int_1^e\int_{lny}^1 dxdy$

8) *If* $F(x,y,z) = 2xy^3\hat{i} + 4x^2y^2\hat{j}$ *then at* $(x,y) = (1,1)$, $divF =$ **1 point**

- 8

10

4

2

No, the answer is incorrect.
Score: 0

Accepted Answers:
10

9) $If\ F(x,y,z) = (2x+y^2)\hat{i} + (2xy+3y)\hat{k},\ then\ curl F\ at\ (0,1)\ is\ given\ by$ *0 po*

0

$2\hat{i} + 3\hat{j}$

$4\hat{k}$

$2\hat{k}$

No, the answer is incorrect.
Score: 0

Accepted Answers:
0

10) *1 point*

$If\ C\ is\ the\ triangle\ bounded\ by\ x=0,\ x+y=1,\ y=0\ then\ \oint (xy+y^2)dx + x^2dy =$ [Apply Green's The

1/2

11/6

−1/6

5/6

No, the answer is incorrect.
Score: 0

Accepted Answers:
−1/6

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