QuizName: QUIZ – 01

Total Marks: 1

Duration(mins): 00

Question 01 (MC)

|  |  |  |
| --- | --- | --- |
| \ \int\ 2x\ dx\ =\ f(x)\ +\ C,\ then\ f(x)\ is | | MC |
| **Default mark :** | | 1 |
| **Number of options?** | | **5** |
| **#** | **Answers** | **Grade** |
| **A** | 2^x | 000 |
| B | 2xloge2 | 000 |
| C | 2xloge2 | 001 |
| D |  | 000 |
| E |  | 000 |

Question 02 (MC)

|  |  |  |
| --- | --- | --- |
| If\ \int\ sec²(7 – 4x)dx = a tan (7 – 4x) + C,then value of a is | | MC |
| **Default mark :** | | 1 |
| **Number of options?** | | **5** |
| **#** | **Answers** | **Grade** |
| **A** | -4 | 000 |
| B | -1/4 | 001 |
| C | -3 | 000 |
| D | 0 | 000 |
| E |  | 000 |

Question 03 (MC)

|  |  |  |
| --- | --- | --- |
| \sum\_{0}^{4}x | | MC |
| **Default mark :** | | **1** |
| **Number of options?** | | **5** |
| **#** | **Answers** | **Grade** |
| **A** | 5 | 000 |
| B | 6 | 000 |
| C | 8 | 001 |
| D |  | 000 |
| E |  | 000 |

Question 04 (MC)

|  |  |  |
| --- | --- | --- |
| i\hbar \frac{\partial}{\partial t}\Psi(\mathbf{r},t) = \left[-\frac{\hbar^2}{2m}\nabla^2 + V(\mathbf{r},t)\right]\Psi(\mathbf{r},t) \text{what equation is it?} | | MC |
| **Default mark :** | | **1** |
| **Number of options?** | | **3** |
| **#** | **Answers** | **Grade** |
| **A** | \text{Scrodinger wave equation} | 001 |
| B | \text{Khushal’s wave equation} | 000 |
| C | \text{Dharmik’s wav equation} | 000 |
| D |  | 000 |
| E |  | 000 |

Question 05 (MC)

|  |  |  |
| --- | --- | --- |
| \sum\_{k=1}^{n} k^2 = \frac{n(n + 1)(2n + 1)}{6} \text{where n=10} | | MC |
| **Default mark :** | | 1 |
| **Number of options?** | | **4** |
| **#** | **Answers** | **Grade** |
| **A** | 320 | 000 |
| B | 330 | 001 |
| C | 350 | 000 |
| D | 340 | 000 |
| E |  | 000 |

Question 06 (MC)

|  |  |  |
| --- | --- | --- |
| \text{Solve the equation} \(z^2 - (2 + i)z + (3 - 2i) = 0\)\text{, where \(z\) is a complex number.} | | MC |
| **Default mark :** | | 1 |
| **Number of options?** | | **3** |
| **#** | **Answers** | **Grade** |
| **A** | \item \(z = 1 + i\) | 001 |
| B | \item \(z = 2 - i\) | 000 |
| C | \item \(z = 1 - i\) | 000 |
| D |  | 000 |
| E |  | 000 |

Question 07 (MC)

|  |  |  |
| --- | --- | --- |
| /text{what is the value of n} | | MC |
| **Default mark :** | | 1 |
| **Number of options?** | | **5** |
| **#** | **Answers** | **Grade** |
| **A** | x^2 | 000 |
| B | 2x^3 | 000 |
| C | 0 | 000 |
| D | ∞ | 000 |
| E |  | 000 |

Question 08 (MC)

|  |  |  |
| --- | --- | --- |
| \alpha = \sum\_{k=1}^{\infty} \sin^2 \left( \frac{\pi}{6} \right) k \text{ Let 𝑔 ∶ [0, 1] → ℝ be the function defined by 𝑔(𝑥) =} 2\alpha x + 2\alpha(1-x) \text{Which of the following is true} | | MC |
| **Default mark :** | | 1 |
| **Number of options?** | | **4** |
| **#** | **Answers** | **Grade** |
| **A** | The minimum value of 𝑔(𝑥) is 2 | 000 |
| B | The maximum value of 𝑔(𝑥) is 1 + 2^1/3 | 000 |
| C | The function 𝑔(𝑥) attains its maximum at more than one point | 001 |
| D | The function 𝑔(𝑥) attains its minimum at more than one point | 000 |
| E |  | 000 |

Question 09 (MC)

|  |  |  |
| --- | --- | --- |
| \begin{matrix}1&0&0\\0&1&0\\0&0&1\\\end{matrix} | | MC |
| **Default mark :** | | 1 |
| **Number of options?** | | **3** |
| **#** | **Answers** | **Grade** |
| **A** | Null matrix | 000 |
| B | Identity matrix | 001 |
| C | Square matrix | 000 |
| D |  | 000 |
| E |  | 000 |

Question 10 (MC)

|  |  |  |
| --- | --- | --- |
| 1+1+? | | MC |
| **Default mark :** | | 1 |
| **Number of options?** | | **5** |
| **#** | **Answers** | **Grade** |
| **A** | 11 | 000 |
| B | 2 | 001 |
| C | 3 | 000 |
| D | 4 | 000 |
| E | 5 | 000 |