Subject: Mathematics for Engineer

Quiz number: 1

Number of question: 15

Structure:

* level 1(knowledge & comprehension): 3;
* level 2 (application & analysis): 9;
* level 3 (synthesis & evaluation): 3.

Time: 30’.

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| QN=1 | (Level 1) Use the table to evaluate the expression.   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | *x* | 1 | 2 | 3 | 4 | 5 | 6 | |  | 3 | 2 | 1 | 0 | 1 | 2 | |  | 6 | 5 | 2 | 3 | 4 | 6 | |
| a. | 2 |
| b. | 3 |
| c. | 1 |
| d. | 5 |
| e. | 0 |
| f. |  |
| ANS: | E |
| PTS: |  |
| CHAPTER: | 1 |
| MIX CHOICES: | Yes |

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| QN=2 | (Level 2) In the function  what must be the coefficient b, if |
| a. | -6 |
| b. | 8 |
| c. | 6 |
| d. | -8 |
| e. | 1 |
| f. |  |
| ANS: | C |
| PTS: |  |
| CHAPTER: | 1 |
| MIX CHOICES: | Yes |

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| QN=3 | (Level 2) Find |
| a. |  |
| b. |  |
| c. |  |
| d. |  |
| e. |  |
| f. |  |
| ANS: | B |
| PTS: |  |
| CHAPTER: | 1 |
| MIX CHOICES: | Yes |

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| QN=4 | 1. (Level 2) Find the range of the function. |
| a. |  |
| b. |  |
| c. |  |
| d. |  |
| e. |  |
| f. |  |
| ANS: | C |
| PTS: |  |
| CHAPTER: | 1 |
| MIX CHOICES: | Yes |

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| QN=5 | (Level 2) Find the domain of the function.   |  |  | | --- | --- | |  |  | |
| a. |  |
| b. |  |
| c. |  |
| d. |  |
| e. |  |
| f. |  |
| ANS: | D |
| PTS: |  |
| CHAPTER: | 1 |
| MIX CHOICES: | Yes |

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| QN=6 | (Level 2) Find the vertical asymptotes of the function. |
| a. | x = 0; x=3/2 |
| b. | y=2/3 |
| c. | x= 2/3 |
| d. | x=-3/2 |
| e. |  |
| f. |  |
| ANS: | A |
| PTS: |  |
| CHAPTER: | 2 |
| MIX CHOICES: | Yes |



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| QN=7 | (Level 1) Find  in terms of. |
| a. |  |
| b. |  |
| c. |  |
| d. |  |
| e. |  |
| f. |  |
| ANS: | E |
| PTS: |  |
| CHAPTER: | 2 |
| MIX CHOICES: | Yes |



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| QN=8 | (Level 2) The mass of part of a wire is kilograms, where *x* is measured in meters from one end of the wire. Find the linear density of the wire when . |
| a. |  |
| b. |  |
| c. |  |
| d. |  |
| e. | None of these |
| f. |  |
| ANS: | D |
| PTS: |  |
| CHAPTER: | 2 |
| MIX CHOICES: | Yes |

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| QN=9 | (Level 1) Find the points on the curve  where the tangent is horizontal. |
| a. |  |
| b. |  |
| c. |  |
| d. |  |
| e. | None of these |
| f. |  |
| ANS: | E |
| PTS: |  |
| CHAPTER: | 2 |
| MIX CHOICES: | Yes |



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| QN=10 | (Level 2) The mass of the part of a metal rod that lies between its left end and a point *x* meters to the right is .  Find the linear density when *x* is 3 m. |
| a. | 9 |
| b. | 30 |
| c. | 6 |
| d. | 15 |
| e. | 45 |
| f. |  |
| ANS: | B |
| PTS: |  |
| CHAPTER: | 2 |
| MIX CHOICES: | Yes |



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| QN=11 | (Level 3) Find the absolute maximum value of  on the interval [- 2, 2]. |
| a. | 4 |
| b. | 2 |
| c. | 0 |
| d. | 1 |
| e. | none of these |
| f. |  |
| ANS: | B |
| PTS: |  |
| CHAPTER: | 3 |
| MIX CHOICES: | Yes |



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| QN=12 | (Level 2) Find *f* .  ,  . |
| a. |  |
| b. |  |
| c. |  |
| d. |  |
| e. |  |
| f. |  |
| ANS: | D |
| PTS: |  |
| CHAPTER: | 3 |
| MIX CHOICES: | Yes |

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| QN=13 | (Level 3) A particle moves along a straight line with velocity function and its initial displacement is . Find its position function. |
| a. |  |
| b. |  |
| c. |  |
| d. |  |
| e. |  |
| f. |  |
| ANS: | A |
| PTS: |  |
| CHAPTER: | 3 |
| MIX CHOICES: | Yes |



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| QN=14  Xem lại | (Level 2) For what values of *c* does the curve have maximum and minimum points?  . |
| a. |  |
| b. |  |
| c. |  |
| d. |  |
| e. |  |
| f. |  |
| ANS: | C |
| PTS: |  |
| CHAPTER: | 3 |
| MIX CHOICES: | Yes |

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| QN=15 | (Level 3) Use Newton's method to approximate the indicated root of  in the interval [1, 2], correct to four decimal places.  Useas the initial approximation. |
| a. | 1,6881 |
| b. | 1,6981 |
| c. | 1,0471 |
| d. | 1,6471 |
| e. | None of these |
| f. |  |
| ANS: | D |
| PTS: |  |
| CHAPTER: | 3 |
| MIX CHOICES: | Yes |