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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. The differential equation is  Select the correct answer.  ​   |  |  |  | | --- | --- | --- | |  | a. | exact with solution | |  | b. | exact with solution | |  | c. | exact with solution | |  | d. | exact with solution | |  | e. | not exact |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2. The differential equation is  Select the correct answer.  ​   |  |  |  | | --- | --- | --- | |  | a. | exact with solution | |  | b. | exact with solution | |  | c. | exact with solution | |  | d. | not exact but having an integrating factor *x* | |  | e. | not exact but having an integrating factor *y* |  |  |  | | --- | --- | | *ANSWER:* | e | |

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| 3. The solution of is  Select the correct answer.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. | it cannot be solved |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 4. The differential equation is  Select the correct answer.  ​   |  |  |  | | --- | --- | --- | |  | a. | linear | |  | b. | homogeneous | |  | c. | separable | |  | d. | exact | |  | e. | Bernoulli |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5. The differential equation is  Select the correct answer.  ​   |  |  |  | | --- | --- | --- | |  | a. | exact with solution | |  | b. | exact with solution | |  | c. | exact with solution | |  | d. | exact with solution | |  | e. | not exact |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6. The differential equation is  Select the correct answer.  ​   |  |  |  | | --- | --- | --- | |  | a. | exact with solution | |  | b. | exact with solution | |  | c. | exact with solution | |  | d. | not exact but having an integrating factor *xy* | |  | e. | not exact but having an integrating factor *y* |  |  |  | | --- | --- | | *ANSWER:* | d | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7. The solution of is  Select the correct answer.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. | it cannot be solved |  |  |  | | --- | --- | | *ANSWER:* | a | |