**Expert ID/Name: Nstructive**

**Date:**

**C:\Users\chari\Desktop\65.PNG**

**Answer:**

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| **Section 1:** Algorithm/Theorem Reminder / A tip for solving these type of questions |
| **Tips:**   1. **If** is a differential equation and then is a homogeneous differential equation. 2. Recall the method of solving thehomogeneous differential equation, hence find its general solution. |

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| **Section 2:** Step-by-step answer |
| Given: Differential equation is  To find: particular solution of , given that .  Step1:   |  |  | | --- | --- | | Instruction | Make subject as in | | Calculation |  |   Step 2:   |  |  | | --- | --- | | Instruction | Put and differentiate with respect to on both sides and then substitute the values in | | Calculation |  |   Step 3:   |  |  | | --- | --- | | Instruction | Apply the integration on both sides. | | Calculation |  | |  |  |   Step 3:   |  |  | | --- | --- | | Instruction | Since and then substitute to find value of parameter. | | Calculation | Substitute    Hence the required particular solution is . | |

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| **Section 3:** |
| Conclusion: Particular solution of  is  Hence, verified. |