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| **Set 2** | | |
| **UNIT TEST** | | |
| **Subject: MATHEMATICS**  **Grade: 12** | | Max. Marks:50Time:2 hours 30 min |
| **SECTION A** (Each question carries 1 marks) | | | |
| **1** | c) | | |
| **2** | c) | | |
| **3** | a)0 | | |
| **4** | b) **1/x** | | |
| **5** | d) +C | | |
| **6** | b) **Cos** | | |
| **7** |  | | |
| **8** | d) | | |
| **9** | C | | |
| **10** | a | | |
| 11 |  | | |
| 12 | **() 2 = 0** | | |
| 13 | Tan y = | | |
| 14. | Required Area = 2 dx= 2/3 sq units | | |
| 15. | I = .dx  let = t dx = dt  = = =  I = =  = = | | |
| **SECTION C** ( 3 marks each) | | | |
| 16. | Point of intersection    Area of required region = | | |
| 17. |  | | |
| 18. | ;  1 – sin2x = t 2  When x= 0, t = -1 and x =  = =  I =  = = - | | |
| 19. |  | | |
| **SECTION D**  ( Each Question carries 5 marks ) | | | |
| 20 | = | | |
| 21 | Solve the following Linear Programming problem graphically:  Maximize Z=600x+400y      Therefore, the maximum of objective function Z = 600x + 400y occurs at the corner point (4, 4) | | |
| **SECTION E**  ( ***3 Case study based questions of 4 marks each with two sub parts .First two case study questions have three sub parts (i) (ii) ( iii) of marks 1,2,1 respectively. The third case study question has two sub parts of 2 marks each.)*** | | | |
| 22. | (i)  **(ii) )**  **(iii)** | | |
| 23 | 1. h= (ii) S= 2 (iii) | | |