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| **PB1/MAAK/1222/A 28-NOV-2022** | | | |
| **PRE-BOARD EXAMINATYION - I (2022-23)** | | | |
| **Subject: Mathematics (Answer key)**  **Grade:XII** | |
|  | C (2) b (3) d (4) d (5) d (6) d (7) b (8) c (9) c (10) b | | |
| **11** | r= d (12) b (13) c (14) d ( 15 ) a (16) b ( 17 ) a ( 18 ) c ( 19 ) b ( 20 ) c | | |
| **15** | 1/5 (16) y cosx =2x+c (17) 2x-2y-z=5 (18) (19) 1 OR (20) | | |
| 21 |  | | ½ +1/2 +1/2 +1/2 =2 mark |
| 22 |  | | ½ mark  ½ +1 Marks |
| 23 | Let 3x=sin | | 1 mark |
|  |  | | 1 mark |
| 24 | m=    Slope decreases @ 180 units/sec | | ½ mark  1 mark  ½ mark |
| 25 | K+2k+2k+k+0.1=1; k = | | 1+1 mark |
| 26 | IF | | 1 mark |
|  | y.sinx=  y sinx=  c=3/2 y sinx=  2y+cos2x=3  OR  IF | | 1 mark  1 mark  1 mark |
| 27 | Sinx-cosx=t ( cosx+ sinx )dx=dt & sin2x=1-t2 | | 1 mark  1+ 1 marks |
| 28 | I= I=  2I= I=  I= ==  I= 2. f(-t) = f(t)  =  OR  I== = | | ½ mark  1 mark  ½ mark  1 mark  1 mark  1+1 marks |
| 29. | t | | 1 mark |
|  |  | | ½ mark |
|  |  | | ½mark  1 mark |
| 30. | = | | 1 mark  1+1 marks |
| 31. | |  |  | | --- | --- | | (0.0) | 0 | | (20,0) | 160000 | | (12,6) | 168000 ( max) | | (0,10) | 120000 | | | Graph + shading 1  Co-ordinate 1  Final ans 1 mark |
| 32. | Fig  = | | 1. ½mark   1½+1  1 mark |
| 33. | x=yv  C=2 | | ½ mark  1 mark  1 mark  1 mark  ½ mark  1 mark |
| 34. | X=  x= | | ½ mark  2¼ mark  ½ mark  1 mark  ¾ mark |
| 35. | Reflexive+ symmetric + transitive+ equivalence  OR  Reflexive+ symmetric+ transitive | | 1+1+2+1  1½ +1½ +2 |
| 36. | x=10,20  C(20)=2000 | | 1 mark  2 mark  1 mark |
| 37. | l= | | 1 mark  2 marks  1 mark |
| 38. | P€ =  P(C/E)= 7/10 | | 2 marks  2 marks |

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