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| **PT1/MAAK/1119B 26/05/2019** | |
| **SUBJECT: MATHEMATICS**  **GRADE: XI**  ANSWER KEY | |
| **SECTION A** | |
| 1. | 16 |
| 2. | 31 |
| 3. | x2+y2-12x+11=0 and x2+y2 +4x-21=0 |
| 4. | y2  =-x |
| 5. | If A={a,b,c, find P(A)= ={ |
| 6. | AU(B∩C) = |
| 7. | n(A∩B)=8 |
| 8. |  |
| **SECTION B** | |
| 9. |  |
| 10. | b2 =6a,  a=-8(rej), a=2, b2=12 |
| **SECTION C** | |
| 11. |  |
| 12. | The general equation of a circle is x2+y2+2gx+2fy+c=0  (3,-2) is a point on the circle, 6g-4f+c=0…………….(i)  (2,0) is a point on the circle, -4g+c=0 ……………….(ii)  (-g,-f) lies on the line 2x – y – 3 = 0, -2g+f-3=0……….(iii)  Solving (i),(ii) and (iii) we get g= , f = 6 and equation of circle is .............................(1)  x2+y2+3x+12y+2 = 0 ...............................(1) |
| 13. | Venn diagram-----------2marks   1. Play all three games=30 2. Hockey but not Football=90 |
| **SECTION D** | |
| 14. | D = (5-i)2 - 4(18 + i)  = -48-14i .......................................(1 mark)  = a + ib  -48-14i = b2 – b2+i2ab  a2- b2 = -48  2ab = -14  (a2 + b2)2 = (a2-b2) 2+ 4a 2 b2  = (-48)2 + (-14)2 = 2500  a2 + b2 = 50  a2 - b2 = -48 ............................(1mark)  --------------------  2a2  = 2 → a ±1  b2  = 49 → b±7  2ab = -ve = +1 ,b= -7 or  a = -1, b= +7  = 1-7i or -1 + 7i ..............................(2marks)  x = +5-i ±(1-7i)  2  = +5-i +(1-7i) or +5-i-1+7i  2 2  = 3 - 4i ; 2 + 3i……………..(2 marks) |

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