**MIDTERM ONE FORM FOUR**

**MATHS**

**MARKING SCHEME**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  No Log34.33 1.53575.25 0.72020.042 .6232.3434  + 1.3434 2.67171.5357.67171.8640 anti log 7.311 X 101 = 73.11 | M1M1M1A1  | All logsAddition & subDivision by 2C.A.O |
|  |  | 4 |  |
|  | * 1. /100 x 100000 = 2,500/=

1.6/100 x 220,000= 3,520/=Total Comm. = 2,500 + 3520= 6,020/= | M1M1A1 |  |
|  |  | 3 |  |
|  |  W2 = p2 Q2 P2 – QW2 = p2 - P2 – Q = W2  Q p2 (W2  - Q) = W2Q (W2- Q) W2– QP = ±  | M1M1A1  |  |
|  |  | 3 |  |
|  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |

P( 7 OR >) 21/36 = 7/12 |  |  |
|  |  |  |  |
|  | in 1 day ,B+B does 1/6 of the work in 4 days, they do 1/6 x 4 = 2/3 of the work.In one day, BOnface does 1/10 of the workIn one day brian does ( 1/6 – 1/10) = 1/15 of the work.If 1/15 afterwork’s done by brian in 1 dayThen 1/3 will be done in ½ x 1 ÷ 1/15= 5 days to complete  | M1M1A1 | Work done by both in 4 day |
|  |  | 3 |  |
|  |  M = KN + h25k + 5h = 50016k + 4h = 800100k+ 20h = 200080k + 20h = 400020k = - 2000k = -100sh = 00 + 2500sh = 3000h = 600∴ M = 600 - 100N | B1M1A1B1 | For two equsAttempt to solve equationsBoths values for variables correctEquation connecting m and N |
|  |  |  |  |
|  | Log 0.045 = log  = log = 2 log 3 + log 5 – log 10002 x 0.4771 + 0.6990 – 3= -1. 3468= .6532 |  |  |
|  |  | 3 |  |
|  | A = PC ( 1 = r /100)6272 = 5600 ( 1 = r /100)11.12 = 1 = r /100 r /100 = 0.12 r = 12%P ( 1 = 12 /100)1 = 5600P = 5600 1.12P= 5000 | M1A1M1A1 |  Correct substCorrect subst. |
| 9. |  | 4 |  |
|  |  | M1A1 |  |
|  |   | 2 |  |
|  |  1 8 28 56 70(3x)8 (3x)7 (3x)6 (3x)5 (3x)41 ( -1/x) 1 ( -1/2x)2 ( -1/2x)3 ( -1/2x)4constan = 70 x 81x4x 1/16x4= 35.4 375 or 28358 | M1M1A1 |  |
|  |  | 3 |  |
|  | Distance = area under the curve= ( ½ x 2 ( 20+30) + 5 x 30 = ½ x 3 x 30) mm= 100 + 150 + 45= 295m | B1M1A1 |  |
|  |  | 3 |  |
|  | ∠ ABD = 360o ( angle formed by a tangent in the opp. Segment).∠ BDA = 127 ( angle in a Δ)∴∠ BDC = 180 – 127 = 53oOr ∠ BDC = 17 + 36 ( exterior angel = opp.inter) | B1M1A1 | Getting ∠ ABD |
|  |  | 3 |  |
|  |  x(x+2) + 2(x+2) x + 2= x + 2dy = 1dx | M1A1B1 | Factorization attempt |
|  |  | 3 |  |
|  |  21m 59m  40m59 2 = 21 2 + 402 – 2 x 2 1 x 40 cosCos  = 592 – 212 – 402 -2 x 21 x 40 = 1440 -1680 = -0.8571 42857 = 148.9972809o = 149o | M1M1A1 |  |
|  |  | 3 |  |
|  | 2 2x+ 3 – 9 (2x) + 1 = 0Let 2x be y8y2 – 9y + 1 = 0Y = 9 ±  16= 9 ± 7 = 1 or 1/8 162x = 2o = x = 0Or 2x = 2 -3 = x = -3 |  |  |
|  |  | 3 |  |
|  | 20,000+ 22000+ 24,200 +………..a = 20,000r = 22000 = 24200 = 1.1 2000 220007th term = 20,000 (1.1)6= 35,431.20  | B1M1A1 | For a or rCorrect subt. |
|  |  | 3 |  |
|  |  | 10 |  |
|  |  | 10 |  |
| 18 | 1. Longitifunal difference = 114 + 66 = 180o
2. 180 x 2 x 22/7 x 6370cos 52
3. 360

= 12325.5km1. 76 x 2 22/7 x 6370

360= 8452.89 kmc) dist = 8452.89kmSpeed = 800 km/hrTime 8452.89 = 10.57hrs 800 = hrs 34min 2 secTime of arrival = 10.00am + 10.342034Or 8.34 pm |  |  |
|  |  | 10 |  |
|  |  |  |  |
|  |  |  |  |
| 19. | 1. S = t3 – 6t +9t+ 5

ds = 3t2 – 12t + 9dtat t = ½ ds = 3 ( ¼ ) – 12 ( ½ ) + 9dt= ¾ - 6 + 9= 3 ¾ 1. ds = 0 = 3t2 – 12t + 9

dtt2 – 4t + 3 = 0t = 3 or t = 1at t = 3s = 27 – 54 + 27 + 5= 5 metresat t = 3s = 1 – 6 + + 5= 9 meters1. points on curve

 t = 0, s = 5 ( 0,5) 0 1 2 t = 1, s = 9 ( 1,9) maximum ds/dt +ve 0 -vet = 3,s = 5 ( 3, 5 ) min 2 3 4 ds/dt -ve 0 - ve |  |  |
|  |  |  |  |

21..

