**121/1 MATHEMATICS PAPER 2 FORM 4**

**END OF TERM II EXAMINATION**

**QUESTIONS**

|  |  |  |
| --- | --- | --- |
| **No** | **WORKING** | **Marks** |
| 1. |

|  |  |
| --- | --- |
| **No** | **Log**  |
| 6.79 | 0.8319 |
| 0.3911 |  + |
|  |  |
| Log 5 (0.6990) |  - |
|  |  |
|  |  |

= 2.721 | M1 logsM1 addition and subtractionM1 A1 |
| 2. | 1. Gradient =
2. Gradient of perpendicular line =
 | B1M1M1A1 |
| 3. | Marked price = Sh. 800Sold at 12% discount | M1M1A1 |
| 4. |  | M1A1 |
| 5. | Length = () cmWidth = () cmArea =  | M1M1M1 A1 |
| 6. |  | M1M1A1 |
| 7. | =  | B1M1A1 |
| 8. | = =  units | M1M1A1 |
| 9. |  | M1M1A1 |
| 10. | And   | B1B1 |
| 11. | No of terms = 20  | M1A1 |
| 12. | C:\Users\Sam\Desktop\STEP UP SERIES\EXAM\MOCK\wambua\Picture 041.jpg  | M1M1A1 |
| 13. |  | M1 M1 A1 |
| 14. | Distance =  | M1 A1 |
| 15. | C:\Users\Sam\Desktop\STEP UP SERIES\EXAM\MOCK\wambua\Picture 041.jpgQT =  | M1 - Angle SPQ Parallel lines M1Diagram M1B1 |
| 16. | Mixture A Mass of maize = Total mass of mixture = 170 kgMaize = Beans = Maize in mixture B = 45 kgBeans in A = 72 – 45 = 27 kgBeans in B = 98 – (45 + 27) = 26 kgRatio in mixture BB: M = 26 : 45  | B1M1M1A1 |
| 17. | Det = 15 + 1 =161. The distance =
 | B1M1M1 M1 M1A1M1M1M1A1 |
| 18. | When t = 0 , V = 77 = c1. Maximum velocity occurs when a = 0

For maximum velocity t =3 | M1M1M1A1M1M1A1M1M1A1 |
| 19. | 1. Line PO is the projection of line VP

PO = PRLine PO = 10 cm.C:\Users\Sam\Desktop\STEP UP SERIES\EXAM\MOCK\wambua\Picture 041.jpg 1. Angle between the planes VQR and PQRS is angle OMV

C:\Users\Sam\Desktop\STEP UP SERIES\EXAM\MOCK\wambua\Picture 041.jpgVO =  | M1M1A1M1 M1A1M1 M1M1A1 |
| 20. | 1. Time difference = 3 hrs

Angle difference = Latitude of B is E1. (i) distance = 850

r = R cos 53.50 = 3789 km(ii) radius of the latitude r = R cos Angle of latitude A and B is  | M1M1A1M1M1M1 A1M1M1A1 |
| 21. | 1. (i)

 at  (ii) at x- axis, y = 01. Area =

= = Negative means the curve is below the x - axis | M1M1A1B1M1A1 both valuesM1M1M1A1 |
| 22. | A = 1. Under rotation the matrix is

 1. Image of (1, 0) about (2, 3) through 1800 is (3, 6). Use Cartesian.

Final image of (1, 0) under S is (3, 6) followed by R isImage is  | M1M1M1 A1M1M1A1M1 M1A1 |
| 23 |  1. Area of circle =

 Area = Area of shaded region =   | M1M1M1M1M1A1M1M1M1A1 |
| 24. | 1.
2. (i) On the graph.

(ii) Equation (iii)  |  |

