**PANGANI GIRLS’ HIGH SCHOOL**

**POST MOCK 2022**

***Kenya Certificate of Secondary Education (KCSE)***

***Feb 2022***

**PAPER 121/2**

**MARKING SCHEME**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  | (3 marks) |
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|  |  |  | (4 marks) |
|  |  |  | (2 marks) |
|  |  |  | (3 marks) |
|  | 1. (a) Expand (1 + ½*x*)10up to the fourth term.     (b) Hence, find the value of (0.84)10. (3 marks) |  | (3 marks) |
|  |  |  |  |
|  | 1. .   (a) Calculate the length PQ. (2 marks)    (b) If ZT = 4cm and PT: TQ = 3:5, find XT. (2 marks) |  | (4 marks) |
|  | Let the constants be hand K so that: |  | (3 marks) |
|  |  |  | (3 marks) |
|  |  |  |  |

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| 17. |  | M1  A1  M1  M1  M1  A1  M1  M1  M1  A1 |  |
|  |  | 10 |  |
| 18. | Maths%20ms%20pp2%20q18 | B1B1  M1  A1  M1  A1  M1  A1  M1  A1 | B1 for two complete branches |
|  |  | 10 |  |
| 19. | Maths%20ms%20pp2%2019 | B1  B1  B1  B1  B1  B1  B1  B1  B1  B1 | PQ and QR to error ± 0.1cm  measurement of 480  construction of PR  of L1  drawing of L2  location of M  measurement of M= 3.8 ±0.1cm  arc drawn through M  shading  labelling of shaded region |
|  |  | 10 |  |
| 20. | Maths%20ms%20pp2%2020    (b)(i)BM2 =62 + 82  BM = 10cm  (ii)Maths%20ms%20pp2%20q20  BD2 = 122 + 82  BD = 14.42cm  P = (14.42 + 10 + 10) cm  = 34.42 cm  (c) = angle between projection of EM on ABCD and the height of the prism  height, h =  h = √48 = 6.928cm  Projection of EM on ABCD  b = 6cm  Maths%20ms%20pp2%20q20c | B1  B1  M1  A1  M1  A1  M1  A1  M1  A1 | drawing of net NB:corresponding sides must be equal error allowed ±0.1cm  labelling  BF and BC divided  Pythagoras solved  length of BD obtained  obtaining sides of triangle and solving angle |
|  |  | 10 |  |
| 21. |  | A1  A1  M1  M1  A1  M1  M1  A1  M1  A1 |  |
|  |  | 10 |  |
| 22. | (b)  Maths%20ms%20pp2%20q22  (c)(i) x = 300  y = 100  (ii) Maximum profit  = (500 x 300) + (300 x 100)  = Shs. 180000 | B1  B1  B1  B1  B3  B1  M1  A1 | All inequalities vertically drawn and shaded |
|  |  | 10 |  |
| 23. | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Nature (x = 1.12) | | | | Nature (x = -1.79 | | | | X | ‘1 | ‘1.12 | ‘2 | -2 | -1.79 | -1 | |  | -1 | 0 | +10 | +2 | 0 | -1 | | Sketch |  |  |  |  |  |  | | Min. Pt | | | | Max. Pt | | |     hence shown | M1  M1  A1  M1  A1  M1  A1  B1  M1  A1 | accexp |
|  |  | 10 |  |
| 24. | (a) Completing table & graph   |  |  | | --- | --- | | Cumulative Frequency | Upper Limits | | 2 | 30.5 | | 7 | 40.5 | | 14 | 50.5 | | 23 | 60.5 | | 34 | 70.5 | | 42 | 80.5 | | 47 | 90.5 | | 50 | 100.5 |   Maths%20ms%20pp2%2024  (b) (i) Q2 ≈ 62 (±1) marks  (ii) Q3 = 75 and Q1 = 48  Interquartile range  Q3 - Q1 = 75 - 48 = 27  ∴Interquartile deviation (Semi – Interquartile range) | B1  P1  C1  B1  M1  A1  M1  A1  M1  A1 | table  At least 6 pts vertically plotted  smooth |
|  |  | 10 |  |