PENANG SANGAM HIGH SCHOOL

YEAR 13
TECHNICAL DRAWING
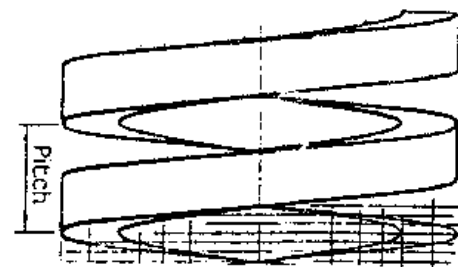
WORKSHEET – 5

QUESTION 1   **Multiple Choice**

1. Which of the following is the name of the locus of a point lying inside the rolling circle which rolls outside the base circle?

   A. Epicycloid
   B. Hypocycloid
   C. Superior Trochoid
   D. Inferior Epitrochoid

2. The scale of 1:500 means

   A. 1 mm = 0.5 m
   B. 1 mm = 5 mm
   C. 1 mm = 0.05 m
   D. 1 mm = 0.005 m

3. In single start helical thread the lead is equal to

   A. Pitch
   B. 2Pitch
   C. 3Pitch
   D. 4Pitch

4. The helical curve shown on the right represents

   A. a single start helical thread
   B. a single start helical spring
   C. a double start helical thread
   D. a double start helical spring

5. Name the conic section which has its eccentricity ratio equal to 1.

   A. Circle
   B. Ellipse
   C. Parabola
   D. Hyperbola

6. The first vector of a logarithmic spiral is 12 and the vector ratio is 4:2. Calculate the second vector.

   A. 14
   B. 18
   C. 22
   D. 24

7. A curve which is the locus of the centers of curvature of another curve is

   A. spiral
   B. evolute
   C. involute
   D. centre of curvature

8. The last sight taken before the level is moved to a new position is known as

   A. Inter sight
   B. Back sight
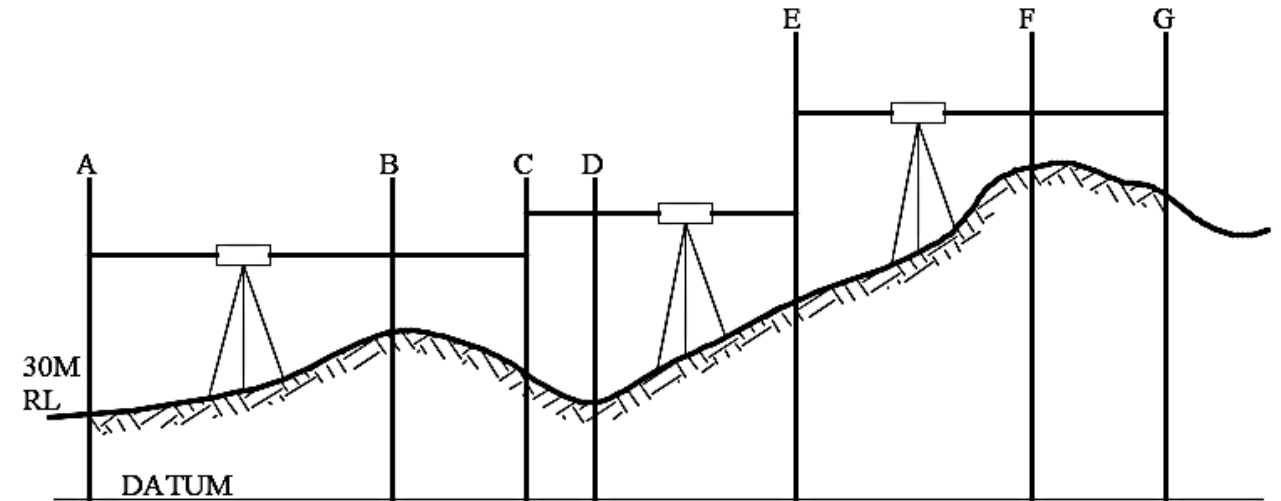   C. Fore sight
   D. Middle sight

QUESTION 2

Given: The profile of a piece of land drawn to a horizontal scale of 1:1000 and a vertical scale of 1:100.

Required:

(i) Complete the level book of the piece of land given below.

(ii) Show the arithmetical checks to ensure all entries are correct.

(iii) Draw the profile of the land to a horizontal scale of 1:1000 and vertical scale of 1:100 **(7 marks)**

SKETCH NOT TO SCALE

LEVEL BOOK

BACK SIGHT	INTER SIGHT	FORE SIGHT	RISE	FALL	REDUCED LEVEL	DIST (M)	STATION	REMARKS
					30.00m	0m	A	BENCH MARK
	1.10		1.20			45m	B	
2.30		1.80			30.50m	65m	C	CHANGE POINT
				0.30	30.20m	75m	D	MANHOLE
2.60		1.30			31.50m		E	
		1.90			33.40m	140m	F	MANHOLE
			0.50				G	FINISH

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THE END