

IQRA NATIONAL UNIVERSITY
PESHAWAR

B.tech → Civil
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paper → Surveying I
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Mid term EXAM.

Q No 1

Given:-

a point 40m
angles 300° and 205°
 $AB = 24m$

Solution :-

Here is given problem
triangles $\triangle CBD$ and
 $\triangle ABD$ are congruent

$$BC/BD = BD/AB$$

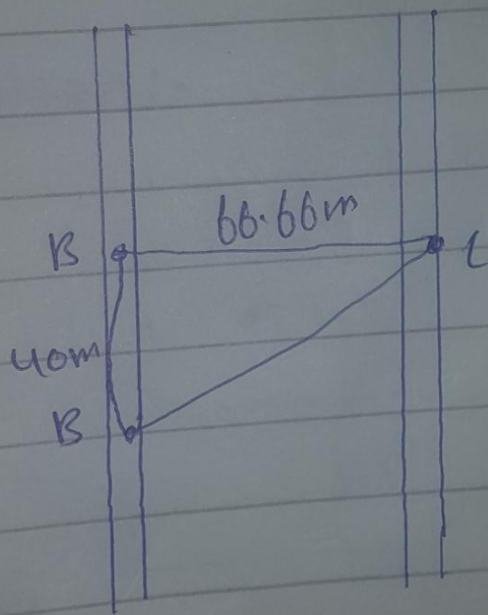
$$BD = 40m$$

$$AB = 24m$$

$$\text{So } = BC/BD = BD/AB \times BD$$

$$BC = \frac{40 \times 40}{24}$$

width of river = 66.66m



Question No 2

Given:-

$$\begin{aligned} AB &= 126^{\circ} 11'' \\ BC &= 58^{\circ} 24'' \end{aligned}$$

Solution:-

$$\begin{aligned} &180^{\circ} - 126^{\circ} 11'' \\ &= 53^{\circ} 49'' \\ &= 53^{\circ} 49'' - 58^{\circ} 24'' \end{aligned}$$

$$\boxed{\text{Ang} = 111^{\circ} 1' 13''}$$

Question No 3 :-

Describe two methods of setting out a right angle with tape at point in the Chain line :-

These articles through light upon the top are used for setting out right angle. and finding the foot of perpendicular on the lines the instrument are 1. cross staff 2. optical square 3. prism square 4. offset Rod 5. Meaning tape.

(1) Open cross staff :-
the simplest form of cross-staff is

Ps open wooden cross-staff shown in fig 3.7. It consist of round or square piece of wood about 4 cm thick and varying from 15 cm to 30 cm in diameter or side mounted on an iron shod wooden staff about 2.5 cm diameter and 1.5 m long the dis

Ps provided with two saw cuts about 1 cm deep at right angle to each other given two line of the sight.

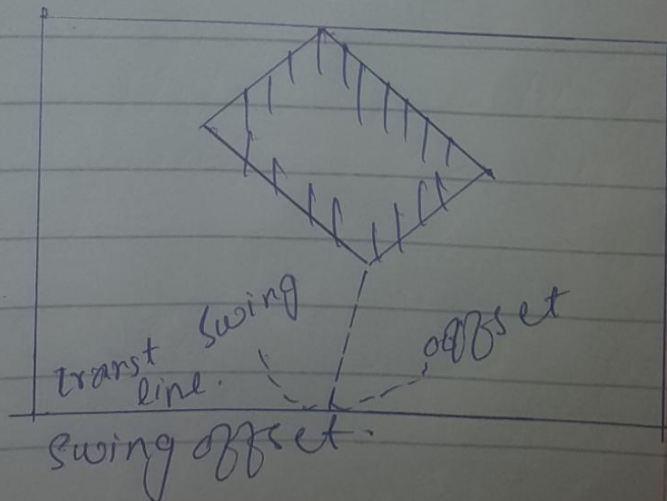
ii French cross staff :-
it consist of an octagonal brass

Hub with sets on all
the eight sides. It has
a alternative vertical
sighting site and an
opposite vertical
window with vertical
fine wire or hair
hair on each of
the four sides. These
are used setting out
right angle on the
other side are
vertical slits which
area at 45° to those
mentioned above for
setting out angles of
 45° . Two sight are
about 8cm apart.
It carries a
socket at these so that
it may be mounted of the
point staff.

Question :- NO 4 part A

Swing offset:-

It is a surveying method for finding the perpendicular distance from a point to a survey line. It is done by swinging a tape about the point as center and measuring the maximum distance from the point to the line.



part B

oblique offset:-

The distance of point from a main survey line measured to the latter that is not right angle.