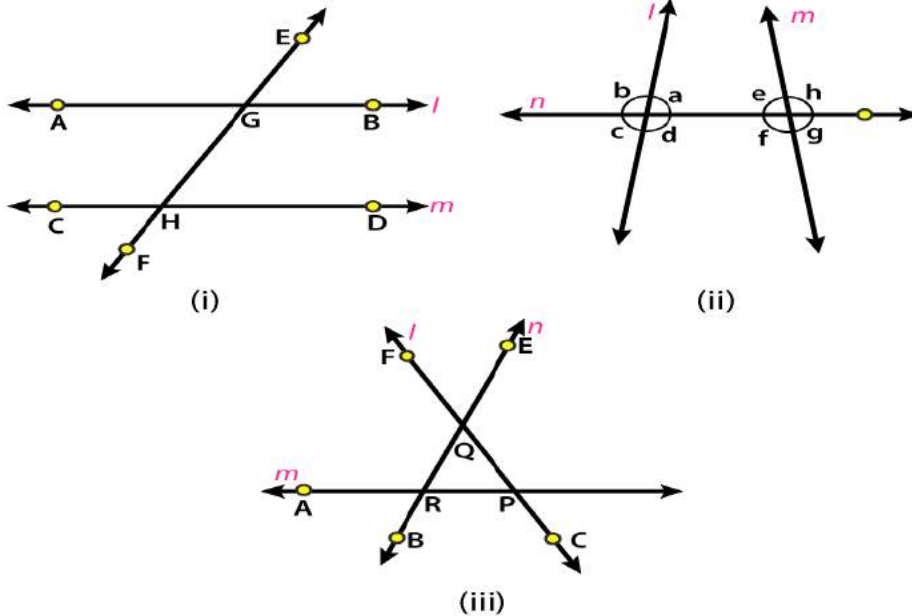


EXERCISE 15.2

1. In Fig. 15.17, line n is a transversal to lines l and m . Identify the following:

- (i) Alternate and corresponding angles in Fig. 15.17 (i).
- (ii) Angles alternate to $\angle d$ and $\angle g$ and angles corresponding to $\angle f$ and $\angle h$ in Fig. 15.17 (ii).
- (iii) Angle alternative to $\angle PQR$, angle corresponding to $\angle RQF$ and angle alternate to $\angle PQE$ in Fig. 15.17 (iii).
- (iv) Pairs of interior and exterior angles on the same side of the transversal in Fig. 15.17 (ii).

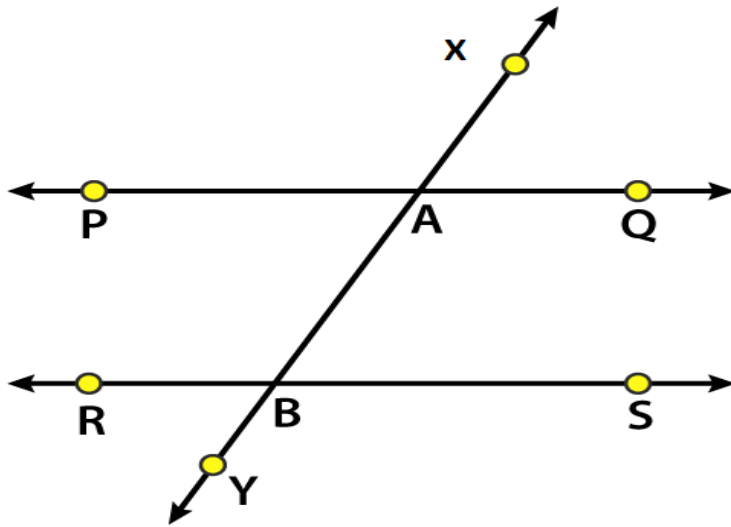


Solution:

- (i) Alternate interior angles are $\angle BGH$ and $\angle CHG$; $\angle AGH$ and $\angle CHF$
 Alternate exterior angles are $\angle AGE$ and $\angle DHF$; $\angle EGB$ and $\angle CHF$
 Corresponding angles are $\angle EGB$ and $\angle GHD$; $\angle EGA$ and $\angle GHC$; $\angle BGH$ and $\angle DHF$; $\angle AGF$ and $\angle CHF$.
- (ii) Angles alternate to $\angle d$ and $\angle g$ are $\angle e$ and $\angle b$ and angles corresponding to $\angle f$ and $\angle h$ are $\angle c$ and $\angle a$.
- (iii) From the figure we know that l is transversal to m and n .
 Angle alternate to $\angle PQR$ is $\angle QRA$
 Angle corresponding to $\angle RQF$ is $\angle BRA$
 Angle alternate to $\angle PQE$ is $\angle BRA$
- (iv) Interior angles are $\angle d$, $\angle f$ and $\angle a$, $\angle e$ and exterior angles are $\angle c$, $\angle g$ and $\angle b$, $\angle h$

2. Match column A and column B with the help of the Fig. 15.18:

- | Column A | Column B |
|--------------------------------|-------------------------------------|
| (i) Vertically opposite angles | (i) $\angle PAB$ and $\angle ABS$ |
| (ii) Alternate angles | (ii) $\angle PAB$ and $\angle RBY$ |
| (iii) Corresponding angles | (iii) $\angle PAB$ and $\angle XAQ$ |



Solution:

- (i) $\angle PAB$ and $\angle XAQ$ are vertically opposite angles
- (ii) $\angle PAB$ and $\angle ABS$ are alternate angles
- (iii) $\angle PAB$ and $\angle RBY$ are corresponding angles