

# Constructions

REASONING  
**WORKBOOK**

## QUESTIONS

**Direction (1-7):** In each of the following questions, a Fig. (X) is given. Select one figure from the four alternative figures, which fits exactly into the given Fig. (X) in order to form a complete square.

1.

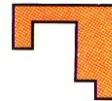
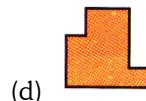
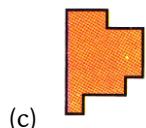
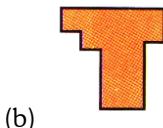
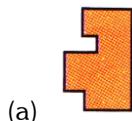


Fig. (X)



2.

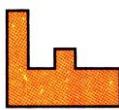
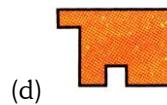
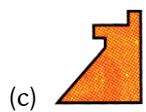
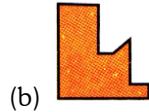
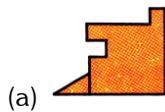


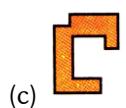
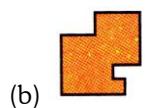
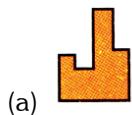
Fig. (X)



3.



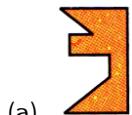
Fig. (X)



4.



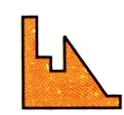
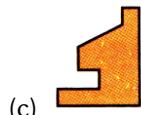
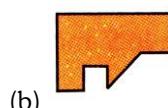
Fig. (X)



5.



Fig. (X)



6.



Fig. (X)



(a)



(b)



(c)



(d)

7.



Fig. (X)



(a)



(b)



(c)



(d)

**Direction (8 -17):** In each of the following questions, four or five geometrical figures are given. You have to select an option that contains all the segments of a complete square.

8.

P  
(a) QRT

Q

R  
(b) RST

S

T  
(c) PRS

(d) PQR

9.

P  
(a) TRS

Q

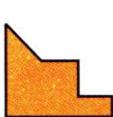
R  
(b) PRT

S

T  
(c) QRT

(d) QRS

10.

P  
(a) RST

Q

R  
(b) QRT

S

T  
(c) QRS

(d) PQR

11.

P  
(a) QS

Q

R  
(b) RS

S

T  
(c) PS

(d) PR

12.

P  
(a) QRS

Q

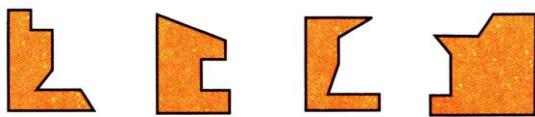
R  
(b) PQR

S

T  
(c) PST

(d) QST

13.



P  
(a) RS



Q  
(b) PS



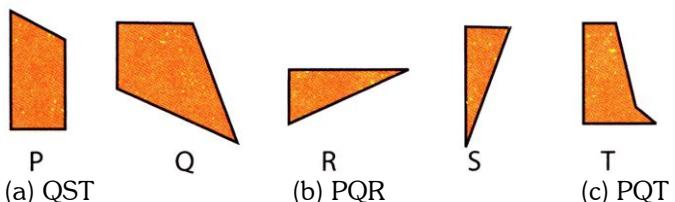
R

(c) QR



(d) PQ

14.



P  
(a) QST

Q

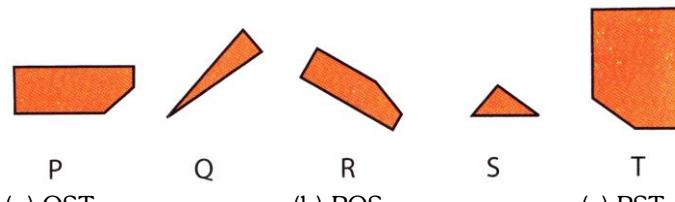
(b) PQR

R

(c) PQT

(d) QRS

15.



P  
(a) QST

Q

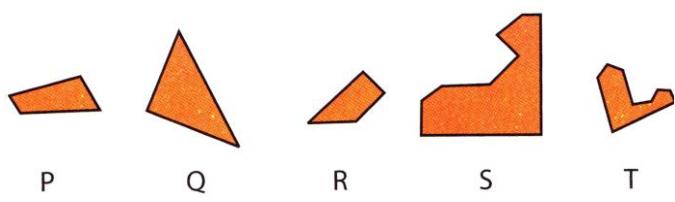
(b) PQS

R

(c) PST

(d) QRS

16.



P  
(a) QRS

Q

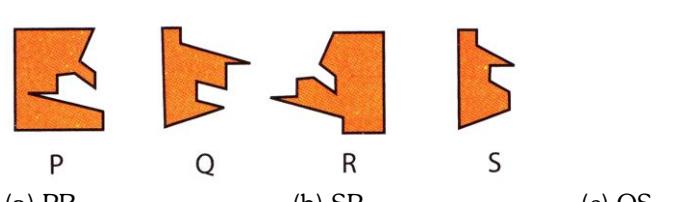
(b) QST

R

(c) PQR

(d) RST

17.



P  
(a) PR

Q

(b) SP

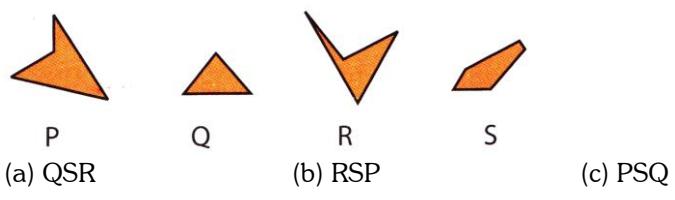
R

(c) QS

(d) PQ

**Direction (18 - 24):** In each of the following questions, four or five geometrical figures are shown. Some of them when fitted together form an equilateral triangle. In order to form such a complete equilateral triangle choose the appropriate alternative.

18.



P  
(a) QSR

Q

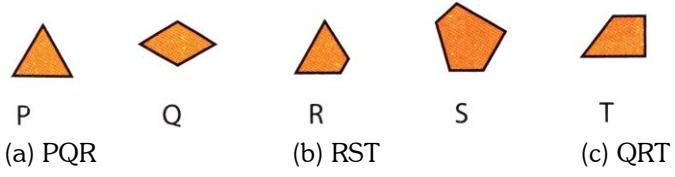
(b) RSP

R

(c) PSQ

(d) PRQ

19.



P  
(a) PQR

Q

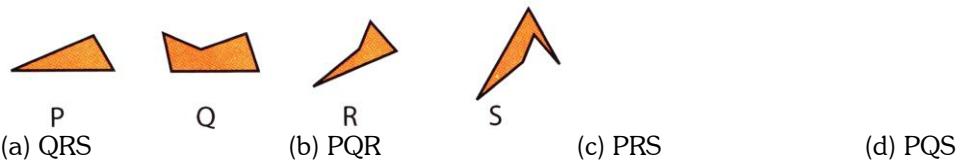
(b) RST

R

(c) QRT

(d) QRS

20.



(a) QRS

Q

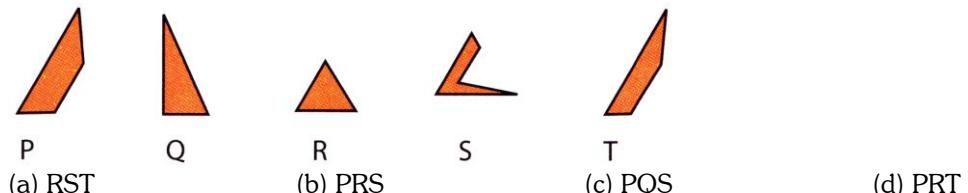
(b) PQR

S

(c) PRS

(d) PQS

21.



P  
(a) RST

Q

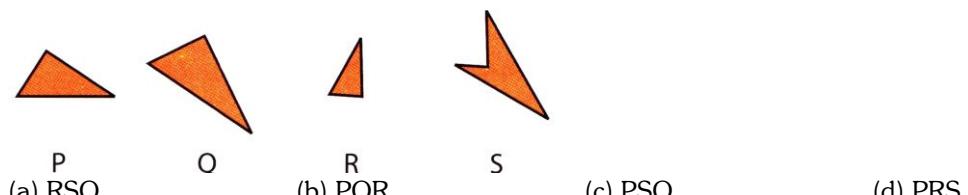
R  
(b) PRS

S

(c) PQS

(d) PRT

22.



P  
(a) RSQ

O

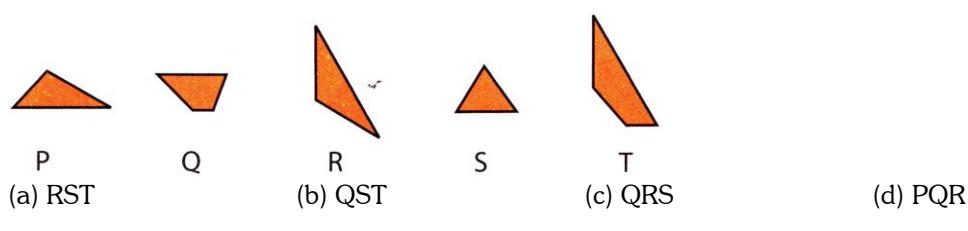
R  
(b) PQR

S

(c) PSQ

(d) PRS

23.



P  
(a) RST

Q

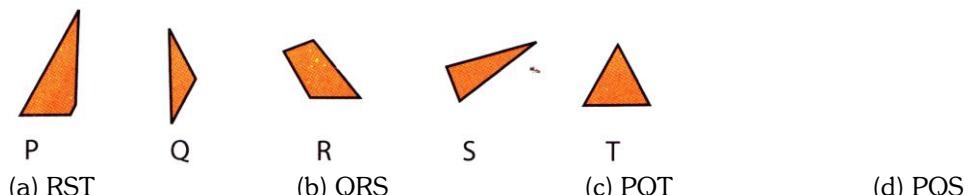
R  
(b) QST

S

(c) QRS

(d) PQR

24.



P  
(a) RST

Q

R  
(b) QRS

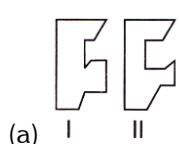
S

(c) PQT

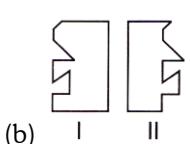
(d) PQS

25. In which of the following options, the two figures (I & II) fit into each other to form a complete square?

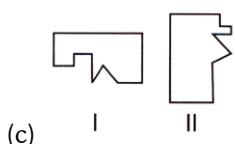
(SOF IMO 2016)



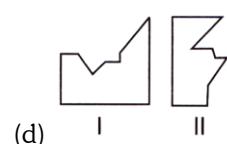
(a) I      II



(b) I      II



(c) I      II

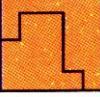
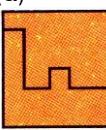
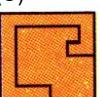
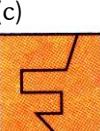
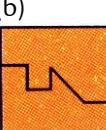
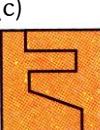


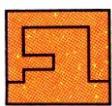
(d) I      II

### ANSWER - KEY

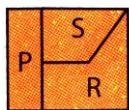
1. D	2. D	3. B	4. C	5. B
6. C	7. C	8. C	9. D	10. A
11. C	12. D	13. B	14. D	15. C
16. A	17. A	18. A	19. A	20. C
21. D	22. D	23. A	24. C	25. B

### EXPLANATIONS

1. (d)  

2. (d)  

3. (b)  

4. (c)  

5. (b)  

6. (c)  

7. (c)



8. (c)



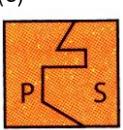
9. (d)



10. (a)



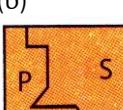
11. (c)



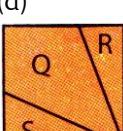
12. (d)



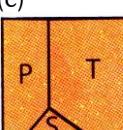
13. (b)



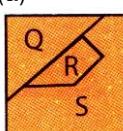
14. (d)



15. (c)



16. (a)



17. (a)



18. (a)



19. (a)



20. (c)



21. (d)



22. (d)



23. (a)



24. (c)



25. (b) Not Available