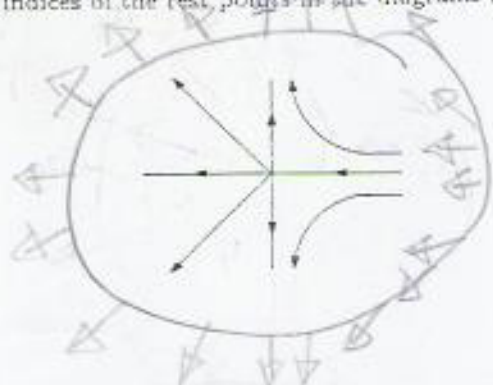


Question 16

- (i) Calculate the indices of the rest points in the diagrams (a), (b) below.

(a)



[3]

(b)



[3]

- (ii) Explain why there is a unique closed orientable surface having a flow with exactly two singularities of type (a) and one of type (b) but no others.

[3]

- (iii) Draw a rest point of a flow which has an index equal to 2, and explain which surface can have a flow having precisely one singularity of type (a), one of type (b) and one of the type you have just drawn.

[2]

[END OF QUESTION PAPER]