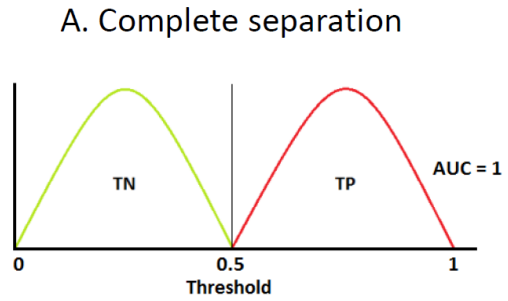
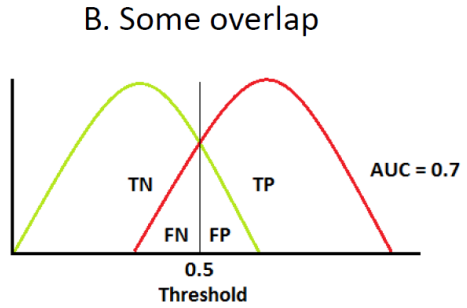
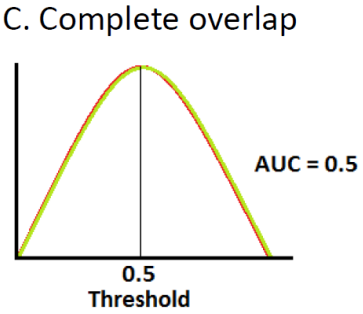
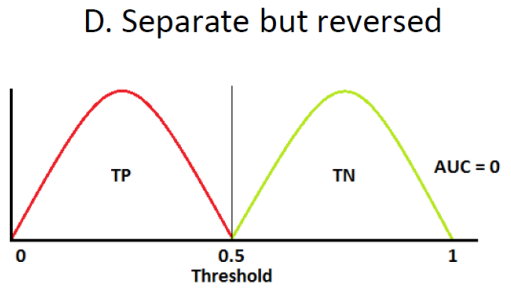
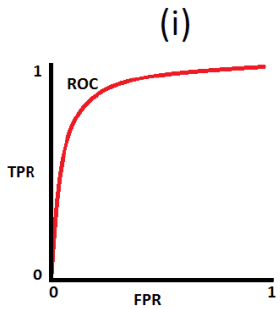
What is the correct correspondence between the score distribution and the ROC curve?

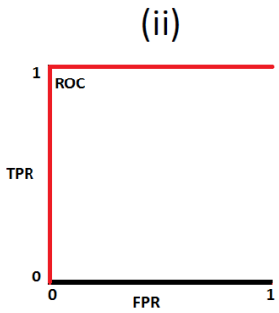


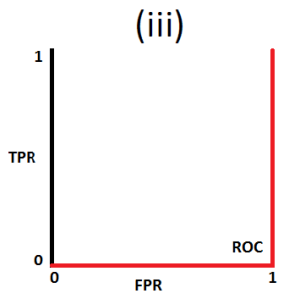


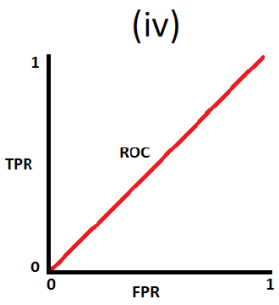












A.A – i, B – ii, C – iii, D – iv

B.A – ii, B – i, C – iv, D – iii

C.A – iii, B – i, C – iv, D – ii

D.A – ii, B – iv, C – i, D – iii

Answer: B

Our data (x1, x2, ..., xn) comes from a mixture of three clusters. Let p1, p2, p3 denote the probability of each of the three clusters and f1(x), f2(x) and f3(x) denote the density function of the three clusters respectively. What is the likelihood function?

A. $\prod_{i=1}^{n} f_1(x_i)^{p_1} f_2(x_i)^{p_2} f_3(x_i)^{p_3}$

B. $\prod_{i=1}^{n} (p_1 f_1(x_i) + p_2 f_2(x_i) + p_3 f_3(x_i))$

C. $\sum_{i=1}^{n} (f_1(x_i)^{p_1} + f_2(x_i)^{p_2} + f_3(x_i)^{p_3})$

D. $\prod_{i=1} (f_1(x_i)^{p_1} + f_2(x_i)^{p_2} + f_3(x_i)^{p_3})$

Answer: B