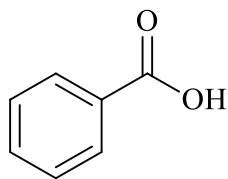
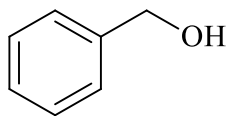
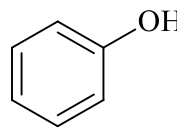


- Benzoic acid **H**, benzyl alcohol **I** and phenol **J** are shown below. The pK_a values of these three compounds are 15.2, 9.9 and 4.2, but not in that order.

**Mark
s**
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**H****I****J**

Assign the correct pK_a to each of these three compounds.

pK_a values:

H =

I =

J =

Draw resonance structures to explain your answer.

Would you expect 4-nitrophenol, **K**, to be more or less acidic than phenol, **J**? Explain your answer.

