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**Grade** 10.00 out of 10.00 (100%)

Question **1**

Correct

Mark 3.00 out of 3.00

Which of the following statements are correct w.r.t. the GrabCut algorithm?

- ☒ a. It is an interactive segmentation algorithm ✓
- ☒ b. It uses a mixture of gaussians model to capture foreground and background pixel statistics ✓
- ☐ c. The algorithm is agnostic to (discards) color information during the segmentation.
- ☐ d. It always gives the correct segmentation with a single user interaction (drawing of the rectangle)
- ☒ e. It is an iterative algorithm that needs multiple tries to converge ✓

Your answer is correct.

The correct answers are:

It is an interactive segmentation algorithm,

It uses a mixture of gaussians model to capture foreground and background pixel statistics,

It is an iterative algorithm that needs multiple tries to converge

Question **2**

Correct

Mark 3.00 out of 3.00

Which type of energy functions are easy (polynomial) to solve in graph-based optimisation?

- ☒ a. Submodular functions
- ☐ b. Any arbitrary function
- ☒ c. Functions defined on trees
- ☐ d. Continuous functions



Your answer is correct.

The correct answers are:

Submodular functions,

Functions defined on trees

Question **3**

Correct

Mark 4.00 out of 4.00

Which of the following are the reason(s) behind the ability of graphical models to incorporate neighbourhood constraints into the pixel labelling problem?

- ☒ a. The use of pair-wise potentials in the cost function
- ☐ b. None of the others
- ☐ c. Modelling the problem as two-class segmentation as opposed to multi-class segmentation
- ☐ d. The use of unary potentials in the cost function
- ☒ e. The use of min-cut that pass through between pixel edges in the graph-cut



Your answer is correct.

The correct answers are:

The use of pair-wise potentials in the cost function,

The use of min-cut that pass through between pixel edges in the graph-cut

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