12 Positron emission tomography (PET) is a medical imaging technique used to create three-dimensional images of the body.

In PET, a low energy positron collides with an electron to produce a pair of gamma photons travelling in opposite directions. The gamma photons are detected and used to form the image.

(a) Name the process involved in producing the gamma photons.

(1)

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(b) Calculate the maximum wavelength of the gamma photons produced.

(4)

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Wavelength = ...

(Total for Question 12 = 5 marks)