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Reg. No. :

4386

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(For the candidates admitted from 2002 and onwards)

M.Sc. DEGREE EXAMINATION, APRIL 2003.

Second Semester

Physics

Paper IV — QUANTUM MECHANICS — II

Time : Three hours

Maximum : 100 marks

SECTION A — (20 × 1 = 20 marks)

Answer ALL questions.

Choose the correct answer :

1. The relationship between scattering amplitude $f(\theta, \phi)$ and scattering cross-section $\sigma(\theta, \phi)$ is

(a) $\sigma(\theta, \phi) = |f(\theta, \phi)|$

(b) $\sigma(\theta, \phi) = |f(\theta, \phi)|^2$

(c) $f(\theta, \phi) = |\sigma(\theta, \phi)|^2$

(d) $\sigma(\theta, \phi) = \frac{|f(\theta, \phi)|}{2}$