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Reg. No. : .....

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(For the candidates admitted from 2002 and onwards)

M.Sc. DEGREE EXAMINATION, APRIL 2004.

First Semester

Physics

QUANTUM MECHANICS — I

Time : Three hours

Maximum : 100 marks

SECTION A — (20 × 1 = 20 marks)

Answer ALL the questions.

Choose the correct answer :

1. If  $|P\rangle = |A\rangle + |B\rangle$  then  $\langle P|$  is given by,  
(a)  $\langle A|B\rangle$  (b)  $\langle A| + \langle B|$   
(c)  $\langle A| + |B\rangle$  (d)  $|A\rangle + \langle B|$ .
2. The maximum value of binding energy of hydrogen molecule by variation method is  
(a) 30.75 eV (b) 25.75 eV  
(c) 5 eV (d) 15 eV.