

May - June 2010

Sem - II

S.E. (Comp) (2008 course)

Total No. of Questions—12]

[Total No. of Printed Pages—8+1

[3762]-210

S.E. (COMP/IT/Electrical/Instru.) (II Sem.) EXAMINATION, 2010

ENGINEERING MATHEMATICS-III

(2008 PATTERN)

Time : Three Hours

Maximum Marks : 100

N.B. :- (i) In Section I attempt Q. No. 1 or Q. No. 2, Q. No. 3 or Q. No. 4, Q. No. 5 or Q. No. 6.

(ii) In Section II attempt Q. No. 7 or Q. No. 8, Q. No. 9 or Q. No. 10, Q. No. 11 or Q. No. 12.

(iii) Answers to the two Sections should be written in separate answer-books.

(iv) Neat diagrams must be drawn wherever necessary.

(v) Figures to the right indicate full marks.

(vi) Use of electronic pocket calculator is allowed.

(vii) Assume suitable data, if necessary.

SECTION I

1. (a) Solve any *three* of the following : [12]

(i)
$$\frac{d^2y}{dx^2} - 2\frac{dy}{dx} - 3y = 3e^{-3x} \sin(e^{-3x}) + \cos(e^{-3x})$$

(ii)
$$(x + 2)^2 \frac{d^2y}{dx^2} + 3(x + 2) \frac{dy}{dx} + y = \cos \log(x + 2)$$

P.T.O.

