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## COMBINED FIRST AND SECOND SEMESTER B.TECH, ENGINEERING DEGREE EXAMINATION, JUNE 2003

## EN 2K 104A—ENGINEERING CHEMISTRY (A)

(New Scheme)

(AI/CS/EE/EC/IT/IC) Maximum: 100 Marks Time: Three Hours (a) What are superconductors? Give examples. I. State free electron theory. What is a concentration cell? marks) Explain the term single electrode potential. marks) What are organic surface coatings? (e) What are the causes of air pollution? (f) Write a note on Zieger Natta catalyst Give the applications of polymers in industries  $(8 \times 5 = 40 \text{ marks})$ A. (a) Write notes on the following (i) Ferro-electric materials. (ii) Dielectric materials. (8 marks) (7 marks) (b) Derive Bragg's equation. OrB. (a) What are conductors and resistors? What are their applications? (7 marks) (8 marks) (b) Discuss in detail on super conductors. A. (a) With an example give a detailed account on ionic and covalent solids. (8 marks) (7 marks) (b) Discuss in detail the working of a fuel cell. (7 marks) B. (a) Define the terms over voltage and polarization. (b) Give the construction and functioning of a glass electrode with a neat sketch.

Turn over

(8 marks)

(i) Thermal pollution. (ii) Power generation pollution. (iii) Power generation pollution. (iv) Power generation pollution.  (iv) Thermal pollution. (iv) Power generation pollution.  (iv) Pickling. (iv)	**************************************		00 Sec. 2	2 4 <sup>(2)</sup>	C 26941
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