



SF-7639

B. E. - IV (Sem - VIII) (Chemical) Examination
May / June - 2011
Fertilizer Technology

Time : Hours]

[Total Marks : 100

Instructions :

(1)

नीचे दृष्टावेक निशानीवाणी विगतो उत्तरवडी पर अवश्य लपवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="checkbox"/> B. E. - IV (Sem - VIII) (Chemical)	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="checkbox"/> Fertilizer Technology	<input type="text"/>
Subject Code No. : <input type="text"/> 7 <input type="text"/> 6 <input type="text"/> 3 <input type="text"/> 9	<input type="text"/>
Section No. (1, 2,.....): <input type="text"/> Nil	<input type="text"/>
	Student's Signature

- (2) Answer all the questions.
(3) Figures to the right indicate full marks.
(4) Draw labelled clean-neat flowsheet wherever required.
(5) All notations carry their usual meaning.

- 1 (a) Answer the following : 10
- (1) Give significance of methonation in Kellogg's NH_3 manufacturing process.
 - (2) Mente catini process is a widely used process for the manufacture of _____.
 - (3) Enlist different technologies used for NH_3 production.
 - (4) Differentiate between stamicarbon and snamprogetti process for urea production.
 - (5) What are DCS and PLC ?
- (b) Discuss manufacturing process of urea from ammonium carbamate by snamprogetti thermal stripping process. 8
- 2 Attempt any two : 16
- (a) Discuss affect of process variables on NH_3 manufacturing process.
 - (b) Describe manufacture of ammonium nitrate by stengel process or by prilling process.
 - (c) Waste water treatment in urea plant.

- 3** Attempt any **two** : **16**
- (a) Classify different methods of N_2 separation and explain any one in detail.
 - (b) Enlist the steps involved in NH_3 production by steam reforming.
 - (c) Draw flowsheet for stamicarbon process and explain CO_2 stripping in detail.
- 4** (a) Answer the following : **10**
- (1) What is desalting of water ?
 - (2) Enlist different methods for the production of phosphoric acid.
 - (3) What are the three alternatives for the recovery of sulfur from petroleum industries ?
 - (4) What is the role of secondary nutrients ?
 - (5) What is telemetering ?
- (b) Explain wet process for production of phosphoric acid **10**
by HCL leaching with its major engineering problems.
- 5** Attempt any **two** : **16**
- (a) Discuss the production of ammonium phosphate with a neat flow diagram.
 - (b) Describe electric furnace process for the production of phosphoric acid.
 - (c) Explain waste water treatment in the fertilizer industry.
- 6** Attempt any **two** : **14**
- (a) Explain EA and EIA for control of environmental pollution.
 - (b) Discuss about different types of nutrients.
 - (c) Enlist different types of bio-fertilizers and discuss in detail.
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