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Total number of printed pages – 2

B. Tech
PECH 5302

Sixth Semester Back Examination – 2015

FERTILISER TECHNOLOGY

BRANCH : CHEM

QUESTION CODE : M 370

Full Marks – 70

Time : 3 Hours

Answer Question No. 1 which is compulsory and any **five** from the rest.
The figures in the right-hand margin indicate marks.



1. Answer the following questions : 2 × 10
- (a) Give examples of primary and secondary plant nutrients.
 - (b) What is vermiculture ?
 - (c) Ammonium sulphate contains _____ % nitrogen and _____ % sulphur.
 - (d) Write the properties of ammonium nitrate.
 - (e) Name the three grades of superphosphate.
 - (f) What is bonemeal ?
 - (g) What is muriate of potash ?
 - (h) Pure potassium sulphate contains _____ % of K_2O .
 - (i) Diammonium phosphate contains _____ % nitrogen and _____ % P_2O_5 .
 - (j) What do you understand by fluid fertilizers ?
2. (a) Discuss in brief the functions of nitrogen and potassium on crop production. 5
- (b) Discuss in detail the need of micronutrients. 5

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3. Critically compare manures with fertilizers. 10
4. Discuss in detail the manufacture of urea with a neat flow sheet. Mention its properties and the precautions in the use of urea. 10
5. Write the chemical reactions involved in the manufacture of ammonium chloride and ammonium nitrate. Also mention their properties. 5+5
6. (a) Discuss in detail about phosphate fixation. 5
- (b) Write the chemical reactions for the production of potassium sulphate and mention its properties. 5
7. (a) Discuss the characteristics, advantages, and disadvantages of complex fertilizers. 6
- (b) Mention the properties of urea ammonium phosphate. 4
8. Write short notes on any **two** of the following : 5×2
- (a) Composting
- (b) Calcium ammonium nitrate
- (c) Triple superphosphate
- (d) Controlled release fertilizers.

