



**HCM-003-001538**

Seat No. \_\_\_\_\_

**Third Year B. Sc. (Sem. V) (CBCS) Examination**

**October - 2017**

**IC - 502 : Heavy & Fine Chemicals - 1  
& Management**

**Faculty Code : 003**

**Subject Code : 001538**

Time :  $2\frac{1}{2}$  Hours]

[Total Marks : 70

- Instructions :**
- (1) All questions are compulsory
  - (2) Figures to the right indicate maximum marks.
  - (3) Draw labeled diagram wherever necessary.
  - (4) Assume suitable data.
  - (5) Question-1 carries 20 marks.
  - (6) Question-2 & 3 carries 25 marks each.

- 1 Answer the following questions : **20**
- (1) What do you mean by pyrolysis?
  - (2) Give formula of quicklime.
  - (3) Yellow P4 can be converted into Red P4 at \_\_\_\_\_ temperature.
  - (4) Diaphragm cell is also known as \_\_\_\_\_
  - (5) Bitton is a raw material for \_\_\_\_\_.
  - (6) Give chemical formula of Glauber's salt?
  - (7) \_\_\_\_\_ is used preservative agent in fermentation process.
  - (8) Give name of substitute of sugar.
  - (9) \_\_\_\_\_ is used for removal of ammonium ion from waste water.
  - (10) How many types of zeolite produced synthetically?
  - (11) \_\_\_\_\_ level-management have technical skills.
  - (12) Establishment of standard performance and measurement of actual performance comes under \_\_\_\_\_ function of management.

- (13) "Planning refers to a preview of future activities" this definition is given by Henry Fayol. Is this sentence true or false?
- (14) What is lead time in inventory control?
- (15) Enlist product development stages.
- (16) According to Henry Fayol "To manage is to \_\_\_\_\_ and plan, to organise, to command, to co-ordinate and to control".
- (17) Supervision, Motivation, Leadership and Communication comes under \_\_\_\_\_ function of management.
- (18) In product life cycle which stage comes between introduction and maturity stages?
- (19) Total Capital Investment = \_\_\_\_\_ + Working Capital
- (20) Enlist factors affecting production planning.

- 2** (A) Answer any **Three** : **6**
- (1) Write any four uses of ammonia.
  - (2) Write uses of hydrogen fluoride.
  - (3) Write properties and use of acetone.
  - (4) What is scientific task setting?
  - (5) What is differential payment system.
  - (6) Explain elements of cost accounting.
- (B) Answer any **Three** : **9**
- (1) Draw nelson cell for manufacturing of Chlorine, explain uses and procedure in brief.
  - (2) Explain manufacturing of silicon carbide in brief.
  - (3) Give in brief: Application of zeolite.
  - (4) Explain types and features of planning with their examples.
  - (5) Explain types of plant maintenance with examples.
  - (6) Explain Maslow's hierarchy of needs for motivation theory with diagram.
- (C) Answer any **Two** : **10**
- (1) Explain manufacturing of super phosphate with diagram.
  - (2) Write in detail: Manufacturing process of carbon black.

- (3) Explain manufacturing of vinyl acetate.
- (4) Explain decision making in detail.
- (5) Explain factors involved in product cost estimation.

- 3** (A) Answer any **Three** : **6**
- (1) Enlist any two use of borax.
  - (2) Draw only diagram of artificial evaporation process for manufacturing common salt.
  - (3) Write uses, properties and manufacturing reaction of pyridine.
  - (4) Define management with its levels.
  - (5) Draw diagram of economic order quantity.
  - (6) Enlist skills required for successful management.
- (B) Answer any **Three** : **9**
- (1) Give synthetic process for manufacturing of ammonium phosphate with diagram.
  - (2) Write uses, properties and manufacturing reaction of 2-butene-1,4-diol.
  - (3) Explain in detail: bromine from bitton.
  - (4) What is SWOC and PEST analysis? Explain with examples.
  - (5) Explain factors affecting job satisfaction.
  - (6) Explain plant location and plant layout with examples.
- (C) Answer any **Two** : **10**
- (1) Write in detail: Ostwald's process for manufacturing of  $\text{HNO}_3$ .
  - (2) Explain manufacturing of phosphoric acid by electric arc furnace process.
  - (3) Explain planning in detail.
  - (4) Explain functions of management.
  - (5) Explain Product life cycle with examples.