



PAQ-003-001538

Seat No. _____

B. Sc. (Sem. V) (CBCS) Examination

October / November - 2018

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

Faculty Code : 003

Subject Code : 001538

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

[Total Marks : **20+50=70**

- Instructions :**
- (1) All the 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 carry 25 marks each.

1 Answer the following questions : 20

- (1) _____ is a distinct process consisting of planning, organizing, activating and controlling to determine and accomplish the objectives by the use of people and resources.
- (2) There are mainly three managerial skills according to Professor _____
- (3) F.W Taylor has given concept of _____
- (4) According to _____ planning is deciding in advance - what to do, when to do and how to do. It bridges the gap from where we are and where we want to be.
- (5) Brainstorming is probably the most popular method of generating _____.

- (6) Hierarchy of needs is a theory in psychology proposed by _____
- (7) In EOQ, O stands for _____
- (8) Total cost = Holding cost + _____ cost.
- (9) Full form of PLC is _____ life cycle.
- (10) Total Capital Investment = _____ Capital Investment + Working Capital
- (11) Common salt is also called _____
- (12) The molecular formula of Glauber's salt.
- (13) Cumene process is used to manufacture _____ from benzene.
- (14) Give any two properties of melamine.
- (15) Sorbitol is also known as _____
- (16) Iodine can be manufactured from sea water.
True/False?
- (17) Ostwald process is used to manufacture _____ acid.
- (18) Write raw materials required for manufacturing of ammonium nitrate.
- (19) Electric arc furnace utilizes low grade of phosphate rock. True/False?
- (20) Nelson cell is also known as _____

2 (a) Answer any **three** :

6

- (1) Define management according to Henry Fayol.
- (2) What is preventive maintenance of plant?
- (3) What is Product Turnaround in inventory management?
- (4) Write properties of pyridine.
- (5) Enlist two methods by which vinyl chloride can be manufactured.
- (6) Draw only block diagram for production of ammonium phosphate.

(b) Answer any **three** : **9**

- (1) Enlist and describe managerial skills.
- (2) Enlist functions of planning, explain any three in brief.
- (3) Explain in detail : Plant location.
- (4) Write properties and uses of formaldehyde.
- (5) Write reaction for synthesis of sorbitol from dextrose.
- (6) Write a brief note on sodium sulfate.

(c) Answer any **two** : **10**

- (1) Explain process of decision making in detail:
- (2) Write a detailed note on concept of inventory management with diagram.
- (3) Discuss manufacturing of synthetic graphite with neat diagram.
- (4) Explain production of bromine from seawater.
- (5) Describe manufacturing of acetylene by partial combustion of natural gas.

3 (a) Answer any **three** : **6**

- (1) What is setup cost?
- (2) Give examples of direct cost.
- (3) What is differential payment system?
- (4) Write properties of acetone.
- (5) Draw only diagram for manufacturing of glycerin via spent lye.
- (6) Write a note on acrylates.

(b) Answer any **three** : **9**

- (1) Write a brief note on concept of scientific management.
- (2) Give importance of PEST analysis with example and chart.
- (3) Draw diagram of Economic order quantity. Explain EOQ in brief.
- (4) Write properties and uses of pyridine.
- (5) Write a brief note on fluorine cell.
- (6) Draw only diagram for manufacturing of phthalic anhydride.

(c) Answer any **two** : **10**

- (1) Explain Maslow's hierarchy of needs is a theory in detail with diagram.
 - (2) Explain in detail: Functions of management.
 - (3) Draw organizing chart, explain organizing in industries.
 - (4) Explain manufacturing of boric acid with diagram.
 - (5) Discuss manufacturing of ammonia by Bosch & Harber process.
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