



University of Petroleum & Energy Studies

College of Engineering Studies

Bidholi Campus, Dehradun

End Semester Examination – April, 2017

Programme Name: B.Sc (Petroleum Operations)

Semester VI

Subject: INDUSTRIAL MANAGEMENT & THEORY

M.Marks: 100

Subject code: IMGT 301

Duration: 3 Hrs

This Question Paper has 3 Pages

**SECTION - A**

Answer the following MCQs. Each one carries one mark.

10\*2 = 20 Marks

1. In “POSDECORB” “B” Stands for
  - a. Branding
  - b. Brainstorming
  - c. Budgeting
  - d. All the above
2. As per “Synergy”  $2+2 =$ 
  - a. 4
  - b. <4
  - c. > 4
  - d. Both b & c
3. \_\_\_\_\_ ensures that plans are being implemented and goals are being achieved effectively and efficiently.
  - a. Directing
  - b. Controlling
  - c. Planning
  - d. Organizing
4. \_\_\_\_\_ is the starting point of the management process.
  - a. Planning
  - b. Goal Setting
  - c. MBO
  - d. All the above
5. \_\_\_\_\_ is the system by which companies are directed and controlled.
  - a. Business
  - b. Corporate Governance
  - c. Politics
  - d. All the above
6. \_\_\_\_\_ Principle of Henry Fayol prescribes workers have only one boss.
  - a. Scalar Chain
  - b. Centralization
  - c. Unity of Command
  - d. All the above
7. In SMART goal mechanism “T” stands for
  - a. Transformational
  - b. Timely
  - c. Tactical
  - d. All the above

8. Control starts with \_\_\_\_\_
- a. Setting up of standards
  - b. Formulation of goals
  - c. Evaluation of Results
  - d. All the above
9. FW Taylor is considered as \_\_\_\_\_
- a. Father of scientific Management
  - b. Father of Management
  - c. Father of Engineering
  - d. Father of Law
10. BEP stands for
- a. Break Even Point
  - b. Break End Profit
  - c. Bright End Product
  - d. Business Excellence Programme

### SECTION – B

Answer any **four** of the following questions. Each one carries four marks.  $4 \times 5 = 20$  Marks

11. “Business and Management are complimentary one without other could not exist” Do you agree?
12. What do you know about planning? Briefly signify its importance in Business.
13. Briefly explain the interplay and connectivity of various functions of management.
14. What do you know about various levels of management?
15. What is Plant Layout? How do you connect it with location of plant?

### SECTION – C

Answer any **three** of the following questions. Each one carries ten marks.  $10 \times 3 = 30$  Marks

16. What is Control? How the control function can be utilized to improve the efficiency of organizations?
17. Explain significance of Henry Fayol’s Principles of Management in business and according to you which principle is of great relevance in today’s scenario discuss with valid reasons.
18. Conduct SWOT analysis to Oil & Gas Industry (Downstream).
19. Explain the evolution of Management Thought with the help of contributions made by some great management philosophers.

### **SECTION – D CASE LET (30 Marks)**

In the early morning hours of December 3, 1984, a poisonous grey cloud (forty tons of toxic gases) from Union Carbide India Limited (UCIL's) pesticide plant at Bhopal spread throughout the city. Water carrying catalytic material had entered Methyl Isocyanate (MIC) storage tank No. 610. What followed was a nightmare.

The killer gas spread through the city, sending residents scurrying through the dark streets. No alarm ever sounded a warning and no evacuation plan was prepared. When victims arrived at hospitals breathless and blind, doctors did not know how to treat them, as UCIL had not provided emergency information.

It was only when the sun rose the next morning that the magnitude of the devastation was clear. Dead bodies of humans and animals blocked the streets, leaves turned black, and the smell of burning chilli peppers lingered in the air. Estimates suggested that as many as 10,000 may have died immediately and 30,000 to 50,000 were too ill to ever return to their jobs. The pesticide factory was built in the midst of densely populated settlements. UCIL chose to store and produce MIC, one of the most deadly chemicals (permitted exposure levels in USA and Britain are 0.02 parts per million), in an area where nearly 120,000 people lived. The MIC plant was not designed to handle a runaway reaction. When the uncontrolled reaction started, MIC was flowing through the scrubber (meant to neutralize MIC emissions) at more than 200 times its designed capacity.

MIC in the tank was filled to 87% of its capacity while the maximum permissible was 50%. MIC was not stored at zero degree centigrade as prescribed and the refrigeration and cooling systems had been shut down five months before the disaster, as part of UCC's global economy drive. Vital gauges and indicators in the MIC tank were defective. The flare tower meant to burn off MIC emissions was under repair at the time of the disaster and the scrubber contained no caustic soda.

As part of UCC's drive to cut costs, the work force in the Bhopal factory was brought down by half from 1980 to 1984. This had serious consequences on safety and maintenance. The size of the work crew for the MIC plant was cut in half from twelve to six workers. The maintenance supervisor position had been eliminated and there was no maintenance supervisor. The period of safety-training to workers in the MIC plant was brought down from 6 months to 15 days. All these led to a grave a disaster.

#### **Questions:**

(3\* 10 = 30 Marks)

1. If you are the manager, what impact will be there on you as a manager? What would you tell to your subordinates?
2. Whether the above case involves, faculty plant location and layout? If so, to what extent?
3. How do you resolve this type hazards in your organization (assume)?