Reg. No. : | | | | | | | | | | |

Question Paper Code: 53091

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2017

Third Semester

Chemical Engineering

15UCH301 - INTRODUCTION TO CHEMICAL ENGINEERING

(Regulation 2015)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. What is the pH of distilled water?

    (a) 0   (b) 1   (c) 7   (d) 14

2. Desalination of water

    (a) makes it potable   (b) makes it not potable
    (c) means distillation of water   (d) none of these

3. Shampoos are commercially not available in form of

    (a) powder   (b) gaseous mixture
    (c) solution   (d) emulsion

4. Propulsion of rocket follows from

    (a) Newtons second law of motion   (b) Newtons third law of motion
    (c) law of projectiles   (d) Archimedes princilple

5. Gross and net calorific values will be same for

    (a) methane   (b) propane
    (c) carbondioxide   (d) hydrogen

6. Specific gravity of a metal which weighs 5kg in air and 4kg when submerged in water has

    (a) 5   (b) 1.25   (c) 2.5   (d) 3.75

7. Encyclopaedia of chemical technology is

    (a) Kirk Othmer   (b) Perry
    (c) Mcabe, Smitha & Harriot   (d) Dryden

8. Direct conversion of electricity obtained from sun is by

    (a) Photovoltaic principle   (b) Biomass energy
    (c) wind energy   (d) tidal energy

9. Lubrication is done to control

    (a) friction   (b) wear
    (c) temperature   (d) All the above

10. Energy of sun arises mainly from _____ reaction.

    (a) fusion   (b) fission   (c) combustion   (d) none of these

PART - B (5 x 2 = 10 Marks)

11. State the differences between chemistry and chemical engineering.

12. What is meant by chemical kinetics and process dynamics?

13. What is the difference between unit processes and unit operations?

14. List any four chemical engineering software.

15. Discuss on various range of scales in chemical engineering.

PART - C (5 x 16 = 80 Marks)

16. (a) Elaborate on various classifications Chemical process industries.   (16)

Or

    (b) (i) Discuss on role of Chemical Engineer in chemical industries.   (8)

        (ii) List few Personalities of Chemical Engineering.   (8)

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17. (a) Explain the role of mathematics in chemical engineering. (16)

Or

(b) Write short notes on thermodynamics, transport Phenomena and Process dynamics. (16)

18. (a) (i) Enlist various factors for designing of equipments. (8)

(ii) Demonstrate any one simple chemical engineering experiment. (8)

Or

(b) Draw the flow chart for Sulphuric acid and Soda ash manufacturing. (16)

19. (a) State the role of chemical engineers in the area of food, medical, energy and environmental. (16)

Or

(b) State the relation between chemical engineering and other engineering disciplines. (16)

20. (a) Elaborate on various opportunities for chemical engineers. (16)

Or

(b) Discuss importance of chemical engineering for modern world. (16)

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