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Question Paper Code: 21006

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2014.

Second Semester

Mechanical Engineering

01UME205- BASIC CIVIL AND MECHANICAL ENGINEERING

(Common to all branches)

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 2 = 20 Marks)

1. What is leveling?
2. What is mean by 1:2:4 concrete mix?
3. What is plastering?
4. List the types of dam.
5. What is the function of Surge tank in hydroelectric power plant?
6. What is meant by priming in Centrifugal pumps?
7. Define Compression ratio of an Internal Combustion engine.
8. Brief about the concept of scavenging in Internal Combustion engines.
9. List few properties of a good refrigerant.
10. Mention the functions of an Air-conditioner.

PART - B (5 x 16 = 80 Marks)

11. (a) (i) Define surveying. What are the objectives of surveying? (8)
(ii) Explain the principle of surveying. (8)

Or

- (b) (i) State the characteristics of good bricks. (8)
(ii) State the various uses of cement concrete. (8)

12. (a) Discuss the different types of shallow foundation with neat sketches. (16)

Or

- (b) What are the various types of flooring? Explain any two types of flooring in detail. (16)

13. (a) With a neat layout, explain the various circuits of a Steam Power Plant. Specify its advantages. (16)

Or

- (b) (i) Give a brief classification of Hydraulic Pumps. (4)
(ii) Explain the construction and working of a Positive Displacement Pump with a neat diagram. (12)

14. (a) Explain the working of a Four stroke Petrol Engine with a neat sketch. (16)

Or

- (b) (i) Compare Spark Ignition engine with a Compression Ignition engine. (10)
(ii) What are High Pressure Boilers? Explain the functions of Economizer and Super heater. (6)

15. (a) Explain the principle and working of a Vapor Compression Refrigeration system with a neat sketch (16)

Or

- (b) (i) Explain the terms, Psychrometry and relative Humidity. (6)
(ii) With a neat layout, explain Split type room Air-conditioner. (10)