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**Question Paper Code: 31206**

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2021

Second Semester

Civil 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. Define leveling.
2. List the constituents of portland cement.
3. Define strain.
4. Define elasticity.
5. List the merits of hydel power plant.
6. What is the use of control rods?
7. What is the function of carburetor?
8. Name any four boiler mountings.
9. List the major components of a vapour compression refrigeration system.
10. Name any four refrigerants.

PART - B (5 x 16 = 80 Marks)

11. (a) (i) Briefly discuss the principles of surveying. (8)  
(ii) Briefly discuss the classification of leveling. (8)

Or

- (b) (i) Discuss the different types of bricks. (8)  
(ii) Explain the preparation methodology of cement concrete. (8)

12. (a) List the types of foundations and discuss any four. (16)

Or

- (b) (i) List the types of bridges and explain any one. (8)  
(ii) List the types of dams and explain any one. (8)

13. (a) Draw the layout of gas turbine power plant and explain its working. List its merits and demerits. (16)

Or

- (b) (i) Explain the construction and working of a single acting reciprocating pump with the help of a neat sketch, naming all main parts. (8)  
(ii) Explain the construction and working of a centrifugal pump with a neat sketch. (8)

14. (a) With suitable sketches, explain the working of four stroke diesel engine. (16)

Or

- (b) Compare the four stroke engine and the two stroke engine. (16)

15. (a) Explain the construction and working of the domestic refrigerator with suitable sketch. (16)

Or

- (b) Explain the window air conditioner with a neat diagram. (16)