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Question Paper Code: 52708

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Second Semester

Mechanical Engineering

15UME208 - BASIC CIVIL AND MECHANICAL ENGINEERING

(Common to ALL Branches)

(Regulation 2015)

Duration: 1:15hrs

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. Hydrographic surveys deal with the mapping of CO1-R
(a) Large water bodies (b) Heavenly bodies
(c) Mountaineous region (d) Canal system
2. Which of the below is not a preliminary consideration for building a foundation? CO1-R
(a) Bearing capacity of soil (b) Ground water condition
(c) Settlement control (d) Soil organisms
3. The foundations are placed below ground level to increase CO2-R
(a) Strength (b) Workability
(c) Stability of structure (d) All the above
4. A solid barrier constructed at a suitable location across a river valley to impound water is called CO2-R
(a) Reservoir (b) Dam (c) Bridge (d) Retaining wall
5. The following is not a component of Thermal power plant CO3-R
(a) Condenser (b) Cooling tower (c) Turbine (d) Fuel tank
6. Which of the following pump is preferred for flood control and irrigation applications? CO3-R
(a) Centrifugal pump (c) Axial flows pump
(b) Mixed flow pump (d) Reciprocating pump

7. A two stroke cycle engine gives the number of power strokes as compared to the four stroke cycle engine, at the same engine speed CO4-R
- (a) Half (b) Same (c) Double (d) Four times
8. The power developed by a diesel engine is not increased by CO4-R
- (a) higher compression ratio (b) fine atomisation of fuel
(c) excess supply of air (d) supplying air at increased pressure
9. One tonne of refrigeration is equal to CO5-R
- (a) 21/kJ/min (b) 210/kJ/min (c) 420/kJ/min (d) 620/kJ/min
10. Air conditioning means CO5-R
- (a) Cooling (b) Heating
(c) Dehumidifying (d) All of these

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Give the classification of surveys. List the advantages and disadvantages of chain surveying. CO1-U (8)
12. Discuss different types of foundation with the help of neat sketches CO2-U (8)
13. Explain the working principle of steam power plant with neat sketch CO3-U (8)
14. Describe the principal parts and functions of a Four Stroke Petrol engine with neat sketch CO4-U (8)
15. Explain the principle and working of vapour compression refrigeration system. CO5-U (8)