KUMARAGURU college of technology
character is life

Register Number:……..

B.E DEGREE EXAMINATIONS: JUNE 2015

(Regulation 2009)

Second Semester

ELECTRICAL AND ELECTRONICS ENGINEERING

MEC211**:** Basics Of Civil And Mechanical Engineering

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Cross staff is an instrument used for measuring
   a) Measuring approximate horizontal angles
   b) Setting out right angles
   c) Measuring bearings of the lines
   d) Measuring the non standard areas
2. Abrasive resistance of stone is found from
   a) Smith Test
   b) Hardness test
   c) Impact test
   d) Attrition test
3. If the outdoor terrain is decorated with the suitable art involved is the……
   a) Interior designing
   b) Planning
   c) Landscaping
   d) Designing
4. Cement is a mixture of.....materials.
   a) Calcareous & Argillaceous
   b) Calcareous & Siliceous
   c) Steel & Rock
   d) None of the above
5. Which of the following one is the boiler accessory?
   a) Super heater
   b) Safety valve
   c) Anti priming pipe
   d) Water level indicator
6. Petrol engine works on
   a) Constant volume cycle
   b) constant pressure cycle
   c) Brayton Cycle
   d) Dual cycle
7. For double acting reciprocating pump the delivery stroke in terms of Speed N (rpm) is denoted by
   a) N/minute
   b) 2N/minute

c) N/ 60 per second d) none of the above

8. When the air has maximum amount of water vapour in it is called

a) Moist air b) Saturated air

c) Dry air d) Dehumidified air

9. Compression Temperature of the diesel engine is about

a) 200 °C b) 900 °C

c) 400 °C d) 600 °C

10. The temperature at which water vapour begins to condense is called

a) Dry bulb temperature b) Wet bulb temperature

c) Dew point temperature d) Dew point depression

PART B (10 x 2 = 20 Marks)

11. What is chain surveying?
12. Write short notes on classification of bricks.
13. What are the types of stone masonry?
14. What is called as gravity dam?
15. Define Scavenging.
16. What is called water hammer?
17. What is the function of the Anti Priming Pipe in the boiler?
18. Define lagging.
19. What is called ton of refrigeration?
20. Define the term Relative Humidity.

PART C (5 x 14 = 70 Marks)

21. a) What are the different types of cement and explain the properties of good cement.

(OR)

b) Explain in detail about the determination of areas by surveying.

22. a) How are bridges classified? Explain the construction details with neat sketch?

(OR)

b) Enumerate different types of foundation you would recommend under different situation and soil conditions explain them briefly.

23. a) Explain in detail about the construction and working principle of Volvox boiler with neat sketch.

(OR)

b) Explain the layout, merits and demerits of nuclear power plant with neat sketch.

24. a) (i) Explain the construction and working principle of four stroke diesel engine with neat sketch. (10)

(ii) Write a short notes and the purpose of specific speed of a centrifugal pump. (4)

(OR)

b) (i) Draw the sketch of double acting reciprocating pump and explain its working principle. (10)

(ii) What is called valve overlapping period? (4)

25. a) With the help of neat sketch explain the working principle of Window type air conditioning system.

(OR)

b) Explain the construction and working principle of Vapour Absorption System of refrigeration with neat sketch.

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