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Question Paper Code: 42705

B.E. / B.Tech. DEGREE EXAMINATION, **MAY 2018**

Second Semester

Computer Science and Engineering

14UME205 – BASIC CIVIL AND MECHANICAL ENGINEERING

(Common to EEE, ECE, EIE, ICE, MECH and IT)

(Regulation 2014)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 1 = 10 Marks)

- The first reading from a level station is
(a) fore sight (b) intermediate sight (c) back sight (d) any sight
- Steel sections are generally made of low carbon steel or mild steel with less than 0.25 percent
(a) calcium (b) nitrogen (c) hydrogen (d) carbon
- The internal forces cause internal _____ distributed throughout the material of the body
(a) stress (b) strain (c) stress and strain (d) none of these
- Which of the following materials is most elastic
(a) rubber (b) plastic (c) brass (d) steel
- Economiser is used to heat
(a) Air (b) Feed water
(c) Flue gases (d) All of the above
- For emergency need of power we use _____ power plant.
(a) Gas (b) Steam (c) Diesel (d) Hydro Electric

7. Boiler is used to produce
(a) liquid (b) steam (c) ice (d) gas
8. The other name for Petrol Engine is
(a) SI Engine (b) CI Engine (c) Diesel (d) Gas Turbine
9. In a vapor-compression refrigeration system, the abrupt reduction of pressure takes place in the
(a) compressor (b) condenser (c) throttle valve (d) evaporator
10. A refrigerant uses in vapour absorption refrigerator is
(a) Water (b) Ammonia
(c) Aqua- ammonia (d) Freon

PART - B (5 x 2 = 10 Marks)

11. Write the principle of surveying.
12. Define landscaping.
13. What is known as scavenging?
14. What do you understand by scavenging?
15. Define “ton of refrigeration”.

PART - C (5 x 16 = 80 Marks)

16. (a) Explain in detail about the types, classifications, and principles of surveying. (16)
- Or
- (b) Discuss in detail about the types, properties and uses of cement. (16)
17. (a) Discuss in detail about the different types of foundations. (16)
- Or
- (b) What are the different types of bridges and explain briefly. (16)

18. (a) Draw a neat layout of a typical steam power plant and explain the various circuits involved in it. (16)

Or

(b) Explain the working method of a steam power plant with a neat sketch and mention its merits and demerits. (16)

19. (a) Explain the construction and working principle of any one of the boiler with neat sketches. (16)

Or

(b) Compare Four strokes and two strokes Engine. (16)

20. (a) (i) Draw the layout of a vapor absorption refrigeration system and briefly explain the working principle. (12)

(ii) List any four commonly using refrigerants (04)

Or

(b) With a neat sketch, explain in detail the working of a window type room air conditioner. (16)
