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**B.E. / B.TECH. DEGREE EXAMINATIONS, MAY 2017**  
**SECOND SEMESTER**

**GE16252 – BASIC CIVIL AND MECHANICAL ENGINEERING**  
*(Electrical and Electronics Engineering)*

**(Regulation 2016)**

**Q. Code: 145384**

**Time: Three hours**

**Maximum : 100 Marks**

Answer **ALL** questions

**PART A - (10 X 2 = 20 Marks)**

1. What are the two main principles of surveying?
2. Define Segregation in concrete.
3. State the objectives of foundation.
4. List the classification of beams.
5. What are the main purposes of a condenser in a steam power plant?
6. Write difference between centrifugal pump and reciprocating pump.
7. What is meant by scavenging in two stroke engines?
8. What is the function of super heater in boiler?
9. What is capacity of refrigeration?
10. Define relative humidity.

**PART B - (5 X16 = 80 Marks)**

11. (a) The following staff readings were observed successively with a dumpy (16) level. The instrument was shifted after second and fifth readings: 0.870; 1.635; 2.135; 1.280; 2.980; 3.125; 0.120; 1.825; 2.765; 2.015. The first reading was taken at a bench mark elevation of +100.000. Enter the readings in the level book and calculate the final reduced levels. Apply the usual checks.

**(OR)**

(b) What are the different types of cement? Explain their properties and uses? (16)

12. (a) Explain with neat sketch the English Bond and Flemish Bond in brick masonry. (16)

**(OR)**

(b) List the classification of dams and state the factors governing the selection of site for the dams. (16)

13. (a) Explain with neat sketch the working and construction of a thermal power plant with various circuits. (16)

**(OR)**

(b) Explain with neat sketch the working and construction of a single and double acting reciprocating pumps. Also write differences between the two. (16)

14. (a) Explain construction and working principle of Four Stroke Petrol Engine with neat sketch. (16)

**(OR)**

(b) With the help of a neat sketch, explain the working of Cochran boiler. (16)

15. (a) Draw the layout of a vapour absorption refrigeration system and briefly explain its working principle. (16)

**(OR)**

(b) Classify the air conditioning systems on the basis of their major functions and explain any one with neat diagram. (16)