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B.E. / B.TECH. DEGREE EXAMINATIONS, DEC 2019

Second Semester

GE16252 – BASIC CIVIL AND MECHANICAL ENGINEERING*(Electrical and Electronics Engineering)***(Regulation 2016)****Time: Three Hours****Maximum : 100 Marks**

Answer ALL questions

PART A - (10 X 2 = 20 Marks)

	CO	RBT
1. What are the instruments used for levelling?	1	U
2. List the various types of Cement.	1	R
3. What are the essential requirements of good foundation?	2	U
4. Write any two purpose of dam.	2	U
5. What are the advantages of Hydroelectric power plant?	3	R
6. What is the function of a foot valve in the suction pump?	3	R
7. What are the specific advantages of water tube boilers?	4	U
8. What are the main parts of steam turbine?	4	R
9. State the desirable properties of refrigerants.	5	R
10. What are the limitations of window air conditioner?	5	U

PART B - (5 X16 = 80 Marks)

11. (a) (i) The following perpendicular offsets were taken at 10 m intervals from a survey line to an irregular boundary line: 3.60, 2.80, 4.50, 8.25, 7.85, 6.45, 5.35. Calculate the area enclosed between the survey one and the boundary line by the trapezoidal rule and the Simpson's rule. **(12)** 1 AN
- (ii) What are the advantages of reinforced cement concrete? **(4)** 1 U
- (OR)**
- (b) (i) A series of offsets were taken from a chain line to a curved boundary line at an interval of 5 m in the following order: 0, 3.25, 4.10, 6.45, 8.90, 5.75, 8.50, 0. Calculae the area between the chain line and the boundary line. **(12)** 1 AN

- (ii) What are the major operations involved in the manufacturing of bricks? (4) 1 U
12. (a) (i) Explain the Foundation for Chimneys and cooling towers. (10) 2 U
(ii) Explain the construction of the following types of flooring: (6) 2 R
Industrial flooring, Granite flooring.
- (OR)**
- (b) (i) Explain the various types of foundations for ground storage tanks. (10) 2 U
(ii) Explain the different types of brick masonry normally adopted. (6) 2 R
13. (a) (i) Write in detail the working of thermal power plant and also give their advantages. (12) 3 U
(ii) State the working principle of double acting reciprocating pump. (4) 3 AP
- (OR)**
- (b) Explain with a neat sketch the steam power plant and its various circuits. (16) 3 U
14. (a) (i) Describe the parts, principle and function of two-stroke engine with neat sketch. (12) 4 U
(ii) Distinguish between SI engine and CI Engine. (4) 4 R
- (OR)**
- (b) (i) Describe the parts, principle and function of the operation of four stroke petrol engine with neat sketch. (12) 4 U
(ii) What is an economizer? (4) 4 R
15. (a) (i) Explain the working principle of vapour compression refrigeration system with suitable sketch. (12) 5 U
(ii) Define the Followings: Relative humidity, Dew point temperature. (4) 5 R
- (OR)**
- (b) (i) Explain the working principle of split type room air conditioner. (12) 5 U
(ii) Define :Air conditioning (4) 5 R