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Question Paper Code : 40017

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

Second Semester

Electrical and Electronics Engineering

BE 8252 – BASIC CIVIL AND MECHANICAL ENGINEERING

(Common to : Electronics and Instrumentation Engineering/Environmental Engineering/Instrumentation and Control Engineering/Material Science and Engineering/B.Tech. Bio Technology/Food Technology/Pharmaceutical Technology)

(Regulations 2017)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

PART – A

(10×2=20 Marks)

1. State the required properties of good quality sand.
2. Define Hooke's law.
3. List out the various types of surveying.
4. What are the qualities of good brick ?
5. Mention the objectives of plastering.
6. State the purpose of a dam.
7. Differentiate between boiler mountings and boiler accessories.
8. What is the use of surge tank in hydropower plants ?
9. Define the term refrigeration effect.
10. What is the function of thermostat ?

PART – B

(5×13=65 Marks)

11. a) What are the different types of cement ? Explain in detail.

(OR)

- b) Describe the various forms and sources of energy.

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12. a) Explain the different properties of good building brick.
(OR)
- b) What are the different types of instruments used in chain surveying ? Explain in detail.
13. a) Elaborately discuss the points to be considered while selecting a site for construction of Dam.
(OR)
- b) Discuss the advantages and disadvantages of brick masonry over stone masonry.
14. a) Describe the working principle of nuclear power plant with neat sketch.
(OR)
- b) Explain the following components :
- a) Connecting rod
 - b) Crank shaft
 - c) Camshaft, with reference to function and material.
15. a) Discuss in detail the working of window type air conditioner with a neat sketch.
(OR)
- b) i) Distinguish between vapour compression and vapor absorption refrigeration system. (10)
- ii) List out the applications of refrigeration system. (3)

PART – C

(1×15=15 Marks)

16. a) i) Differentiate between four-stroke and two-stroke cycle engines. (10)
- ii) Mention any five desirable properties of good refrigerant. (5)
- (OR)
- b) i) With an illustration explain the working of a hydroelectric power plant. (10)
- ii) Draw a layout of a typical split air conditioner. (5)