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Question Paper Code : 51646

B.E/B.Tech. DEGREE EXAMINATION, MAY/JUNE 2016

Second Semester

Computer Science and Engineering

**GE 2152/ME 26/10111 CE 206/080510002/GE 1161 A – BASIC CIVIL AND
MECHANICAL ENGINEERING**

**(Common to Electrical and Electronics Engineering, Electronics and Communication
Engineering, Instrumentation and Control Engineering, Electronics and Instrumentation
Engineering, Biomedical Engineering, Medical Electronics Engineering and
Information Technology)**

(Regulations 2008/2010)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions.

PART – A (10 × 2 = 20 Marks)

1. What is Back bearing ?
2. How concrete is designated by grades ?
3. What is a foundation (for building) ?
4. What are the types of flooring used in residential building ?
5. Mention any four types of power plant.
6. How pumps are classified ?
7. Mention the purpose of moderator in a nuclear reactor.
8. What are the functions of fuel injection pump in a Diesel engine ?
9. Define relative humidity.
10. Define the term TR. (Tone of refrigeration)

PART – B (5 × 16 = 80 Marks)

11. (a) Describe the different types of Concrete. (16)

OR

(b) Explain the principle of levelling. How will you measure the distance and angles? (16)

12. (a) (i) State the requirements of good foundation for a building. (6)

(ii) When do we use shallow foundations? With the help of sketches, explain briefly the following types of shallow foundations:

(1) Wall footings. (5)

(2) Isolated column footings. (5)

OR

(b) (i) What is a lintel in a building? Sketch and explain the following types of lintels: (8)

(1) Stone lintel

(2) Steel lintel

(3) R.C.C. lintel

(ii) Derive the relation between Young's modulus (E) and the Bulk modulus [K] of a material. (8)

13. (a) Draw and name the parts of a centrifugal pump and explain its working. (16)

OR

(b) (i) Draw a sketch of a single acting reciprocating pump. (8)

(ii) List the components and briefly explain their functions. (8)

14. (a) With relevant sketches explain the operations of four stroke petrol engine. (16)

OR

(b) (i) Write briefly about the fuel supply systems used in SI engines. (10)

(ii) Compare two stroke and four stroke engines. (6)

15. (a) With the help of a neat schematic diagram, explain the working principle of a vapour absorption refrigeration system. (16)

OR

(b) Draw the layout diagram of a typical domestic refrigerator and explain the working of its various components. (16)