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Question Paper Code : X 60641

B.E./B.Tech. DEGREE EXAMINATIONS, NOV./DEC. 2020

Second Semester

Electrical and Electronics Engineering

GE 2152/ME 26/GE 1151 A/080510002 – BASIC CIVIL AND MECHANICAL ENGINEERING

(Common to Electronics and Communication Engineering, Biomedical Engineering, Computer Science and Engineering, Electronics and Instrumentation Engineering, Medical Electronics Engineering, Instrumentation and Control Engineering and Information Technology)

(Regulations 2008)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

PART – A

(10×2=20 Marks)

1. What are the objectives of surveying ?
2. What is the advantage of reinforced concrete compared to plain concrete ?
3. What are the qualities of good brick ?
4. Differentiate between shallow foundation and deep foundation.
5. Mention any four types of power plants.
6. How pumps are classified ?
7. Define slip in reciprocating pump operation.
8. What is the function of spark plug in a S.I. engine ?
9. What is the purpose of lubrication in an IC engine ?
10. State the role of condenser in vapor compression refrigeration cycles.



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) Discuss in detail about the foundation for machinery.
(OR)
b) i) Explain various kinds of rubble masonry with sketches. **(8)**
ii) Write short notes on columns. **(8)**
13. a) i) Draw the layout of a Diesel Power Plant. State the subsystems and components of the plant and explain each one of them briefly. **(12)**
ii) State the advantages and disadvantages of diesel power plant. **(4)**
(OR)
b) i) State the basic principle of working of a reciprocating pump. **(2)**
ii) With the help of a neat sketch of a single acting reciprocating pump, name the various components and explain its working. **(10)**
iii) What is the difference between single acting and double acting reciprocating pumps ? **(4)**
14. a) i) Make a comparison of a petrol engine and diesel engine based on their operational features. **(10)**
ii) How will you classify internal combustion engines ? State atleast three types of classifications. **(6)**
(OR)
b) i) Make a tabulated comparison of four-stroke and two-stroke engines on various aspects. **(10)**
ii) State the merits and demerits of water tube boilers. **(6)**
15. a) Draw the sketch of vapour absorption refrigeration system and list out the components and their functions. **(16)**
(OR)
b) Write short notes on window and split air conditioner. **(16)**
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