

TED (10)–1004

Reg. No.

(REVISION—2010)

Signature

FIRST SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/
TECHNOLOGY—MARCH, 2012

GENERAL ENGINEERING

[Time : 3 hours

(Maximum marks : 100)

Marks

PART—A

I Answer *all* questions in one or two sentences. Each question carries 2 marks.

1. Name the cement used for refractory concrete. Mention the materials used for manufacturing the cement.
2. What is the use of clutch in a vehicle ?
3. Name different electrical circuits.
4. What is the use of an inverter ?
5. What is a microcontroller ?

(5x2=10)

PART—B

II Answer *any five* of the following questions. Each question carries 6 marks.

1. Write different classifications of sand based on the natural source from which sand is obtained.
2. Draw the block diagram of a diesel engine power plant.
3. List the various forms of steel sections available in the market.
4. List the applications of microcontrollers.
5. Write any six differences between petrol engine and diesel engine.
6. Write short note on : (i) Miniature circuit breaker (MCB) (ii) Earthing.
7. List the application of LED.

(5x6=30)

PART—C

(Answer *one* full question from each unit. Each question carries 15 marks.)

UNIT – I

- III (a) Explain the various types of special bricks used in construction. 10
- (b) List the main structural components of a building. 5

OR

Marks

- IV (a) What are the desirable characteristics of cement concrete ? 10
 (b) Explain the pile foundation. 5

UNIT – II

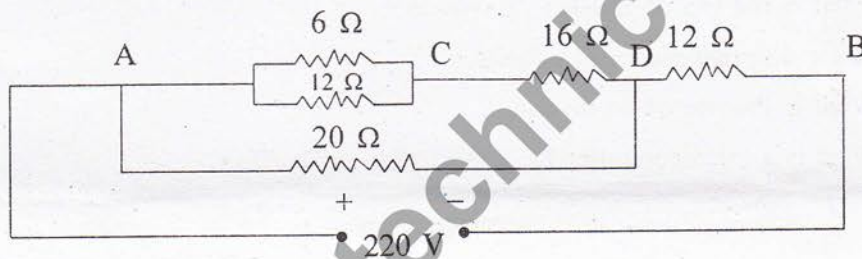
- V (a) With the help of a block diagram explain the working of Nuclear power plant. 10
 (b) Compare four stroke engine and two stroke engine on any of their five features. 5

OR

- VI (a) With a neat sketch explain the working of two stroke petrol engine. 10
 (b) How power plants are classified ? 5

UNIT – III

- VII (a) Calculate the effective resistance of the following combination of resistance and voltage drop across each resistance when a potential of 220 V is applied.



10

- (b) Draw the block diagram showing the distribution of electrical energy from the supply main to the consumer. 5

OR

- VIII (a) A circuit consist of a resistor 6 Ω and 4 Ω and inductive reactance 7 Ω and capacitive reactance 10 Ω connected in series across a 230 V, 50 Hz supply. Calculate the total impedance and current in the circuit. 8
 (b) What is the use of Earth leakage circuit breaker (ELCB) in an electric circuit ? 7

UNIT – IV

- IX (a) With a block diagram explain full wave bridge rectifier. 10
 (b) Draw the block diagram of SMPS. 5

OR

- X (a) Explain the working of an infrared proximity switch. 8
 (b) Suggest suitable methods for disposing used batteries. 7