TED (10) — 1004

(REVISION — 2010)

FIRST SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/ TECHNOLOGY— OCTOBER, 2014

GENERAL ENGINEERING

(Common except DCP and CABM)

[*Time* : 3 hours

(Maximum marks : 100)

Marks

PART—A

(Maximum marks : 10)

I   Answer the following questions in one or two sentences. Each question carries 2 marks.

1.   How I.C. engine are classified based on method of ignition ?

2.   What are the major supply sources ?

3.   Give any one example of active and passive electronic devices.

4.   List any two advantageous of SMPS.

5.   Define the term reduced level.

(5x2=10)

PART—B

(Maximum marks : 30)

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

1.   Compare the four stroke engine with two stroke engine.

2.   Explain briefly the importance of gear box in the power transmission system of an automobile.

3.   Draw a purely capacitive circuit and write an expression to find the capacitive reactance and the current.

4.   Three resistors 4Ω, 12Ω and 6Ω are connected in parallel. If the total current is 12 A. Find the current flowing through each resistor.

5.   Compare LED lighting with CFL lighting.

6.   Define SMD and give its advantages.

7.   Compare English Bond and Flemish Bond.

(5x6=30)

[5]

[P.T.O.

Marks

PART—C

(Maximum marks : 60)

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

UNIT – I

III (a) What are the properties of a good brick ? 5

(b) The following reading were taken with dumpy level and 4M long staff on a continuously slopping ground. Calculate the reduced levels of each station. The R.L. of first point is 100M. The instrument was shifted after 4th and 8th readings. Readings : 0.700, 1.100, 1.950, 2.900, 1.000, 1.550, 2.250, 3.750, 0.850, 2.500, 3.00. 10

OR

IV (a) Explain about different types of foundations. 10

(b) Draw a neat sketch of a corner joint of one brick thick wall made in English Bond style. 5

UNIT – II

V (a) With the help of a neat sketch explain the working of a termal power station. 10

(b) What is the importance of a differential in an automobile ? 5

OR

VI (a) Draw the neat layout of a power transmission system of an automobile and name each unit. 10

(b) How the surge tank works ? 5

UNIT – III

VII (a) A coil of resistance 8Ω and inductance 0.1H is connected in series with a capacitance of 140 μF across 200V, 50Hzs. Calculate :

    (i) Inductive reactance   (iv) Current

    (ii) Capacitive reactance   (v) Power tractor

    (iii) Total impedance 10

(b) Explain different type of electric circuits. 5

OR

VIII (a) Derive an equation to find out the equivalent resistance in a series circuits containing "n" number of resistors. Also give the important characteristics of series circuits. 10

(b) Give a brief explanation about MCB. 5

UNIT – IV

IX (a) Explain the working of a full wave bridge rectifier with relevant diagram. 10

(b) Draw the block diagram of a micro controller and explain its working. 5

OR

X (a) Draw the block diagram of an inverter and explain its working. 10

(b) Compare 2G and 3G mobile services. 5

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