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No.

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Serial No. of
Q. C. A. B.

ಒಟ್ಟು ಪ್ರಶ್ನೆಗಳ ಸಂಖ್ಯೆ : 7]

Total No. of Questions : 7]

[ಒಟ್ಟು ಮುದ್ರಿತ ಪುಟಗಳ ಸಂಖ್ಯೆ : 16

[Total No. of Printed Pages : 16

ಸಂಕೇತ ಸಂಖ್ಯೆ : **71**

Code No. : **71**

ವಿಷಯ : ಎಲಿಮೆಂಟ್ಸ್ ಆಫ್ ಇಂಜಿನಿಯರಿಂಗ್

Subject : **ELEMENTS OF ENGINEERING**

ದಿನಾಂಕ : 06. 04. 2013]

[Date : 06. 04. 2013

ಸಮಯ : ಬೆಳಿಗ್ಗೆ 9-30 ರಿಂದ ಮಧ್ಯಾಹ್ನ-12-15 ರವರೆಗೆ]

[Time : 9-30 A.M. to 12-15 P.M.

ಪರಮಾವಧಿ ಅಂಕಗಳು : 50]

[Max. Marks : 50

FOR OFFICE USE ONLY

Q. No.	Marks		Q. No.	Marks		Q. No.	Marks		Q. No.	Marks		Q. No.	Marks
1.			×			×			×			×	
2.			×			×			×			×	
3.			×			×			×			×	
4.			×			×			×			×	
5.			×			×			×			×	
6.			×			×			×			×	
7.			×			×			×			×	
×			×			×			×			×	
×			×			×			×			×	
×			×			×			×			×	
×			×			×			×			×	
×			×			×			×			×	
×			×			×			×			×	
Total Marks													
Total Marks in words												Grand Total	
1. ✓								✓				✓	
2. ✓													
Signature of Evaluators				Registration No.				Signature of the Deputy Chief				Signature of the Room Invigilator	

[Turn over

General Instructions :

- i) The Question-cum-Answer Booklet consists of 7 objective and subjective types of questions.
- ii) Space has been provided against each objective type question. You have to choose the correct choice and write the complete answer in the space provided.
- iii) For subjective type questions enough space for each question has been provided. You have to answer the questions in the space.
- iv) Follow the instructions given against both the objective and subjective types of questions.
- v) Candidate should not write the answer with pencil. Answers written in pencil will not be evaluated (Except Graphs, Diagrams & Maps).
- vi) In case of Multiple Choice, Fill in the blanks and Matching questions, scratching / rewriting / marking is not permitted, thereby rendering to disqualification for evaluation.
- vii) For reading the questions 15 minutes of extra time has been provided.

Note : Answer questions from Sections **A** & **B** as per the instructions given under them.

SECTION – A

Instruction : Answer Question **No. 1** and any *two* full questions of the remaining.

1. Fill in the blanks with the appropriate word(s) selecting from the choices given in the brackets :

10 × 1 = 10

- a) In pump piston is used for movement.

(centrifugal , reciprocating, gear)

Ans : _____

- b) Thermal efficiency of engine is more.

(steam, gas, I.C.)

Ans : _____

c) Steam containing water particles is called

(*saturated steam, superheated steam, wet steam*)

Ans : _____

d) A turbine is used in hydroelectric power station to obtain electricity.

(*steam, water, gas*)

Ans : _____

e) is used to empty the boiler.

(*Blow off valve, Fusible plug, Safety valve*)

Ans : _____

f) In *d.c.* machines, the pole shoe is laminated to reduce

(*reluctance, inductance, resistance*)

Ans : _____

g) The output rating of a lamp is

(*volt, ampere, watt*)

Ans : _____

h) The current which flows only in one direction is called

(*alternating current, direct current, eddy current*)

Ans : _____

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i) An electric power can be measured by using

(*voltmeter, energymeter, wattmeter*)

Ans : _____

j) The whole circuit of a domestic wiring is protected against short circuits and overloads by

(*miniature circuit breaker, main switch, earthing*)

Ans : _____

2. a) What is a boiler ? 2

b) Name the essential accessories of a boiler. 2

- c) Draw a neat sketch of simple vertical boiler and explain briefly.

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3. a) Define pump.

2

b) Mention the uses of pumps.

2

- c) Describe with a line diagram the working of a reciprocating pump.

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[Turn over

4. a) Differentiate between petrol and diesel engines. 2

- b) Classify I.C. engines. 2

- c) Explain with a neat diagram the working of a two-stroke petrol engine.

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SECTION – B

Instruction : Answer any two full questions of the following.

5. a) What is an alternator ? On what principle does it operate ? 2

- b) Name the three types of self-excited *d.c.* generators. 3

- [illegible]

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-
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-

- b) Draw a sine wave of *a.c.* and mark cycle and amplitude on it.

3

- c) With a neat sketch explain the construction and working of thermostat.

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7. a) Write a short note on indoor wiring. 2

- b) What is a transformer ? Name the three types of transformers according to their constructions.

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

- c) Draw a neat circuit diagram of sodium vapour lamp and name the parts.

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