

Sl. No. : TTTT

ಒಟ್ಟು ಪ್ರಶ್ನೆಗಳ ಸಂಖ್ಯೆ : 7]

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[ಒಟ್ಟು ಮುದ್ರಿತ ಪುಟಗಳ ಸಂಖ್ಯೆ : 4

Total No. of Questions : 7]

[Total No. of Printed Pages : 4

ಸಂಕೇತ ಸಂಖ್ಯೆ : **71**

Code No. : 71

ಇಲ್ಲಿಂದ ಕತ್ತರಿಸಿ

ವಿಷಯ : ಎಲಿಮೆಂಟ್ಸ್ ಆಫ್ ಇಂಜಿನಿಯರಿಂಗ್

Subject : ELEMENTS OF ENGINEERING

(ಹಳೆಯ ಪಠ್ಯಕ್ರಮ / Old Syllabus)

(ಪುನರಾವರ್ತಿತ ಶಾಲಾ ಅಭ್ಯರ್ಥಿ / Regular Repeater)

ದಿನಾಂಕ : 24. 03. 2018]

[Date : 24. 03. 2018

ಸಮಯ : ಬೆಳಿಗ್ಗೆ 9-30 ರಿಂದ ಮಧ್ಯಾಹ್ನ-12-15 ರವರೆಗೆ] [Time : 9-30 A.M. to 12-15 P.M.

ಗರಿಷ್ಠ ಅಂಕಗಳು : 50]

[Max. Marks : 50

General Instructions to the Candidate :

1. This Question Paper consists of 7 objective and subjective types of questions.
2. This question paper has been sealed by reverse jacket. You have to cut on the right side to open the paper at the time of commencement of the examination. Check whether all the pages of the question paper are intact.
3. Follow the instructions given against both the objective and subjective types of questions.
4. Figures in the right hand margin indicate maximum marks.
5. The maximum time to answer the paper is given at the top of the question paper. It includes 15 minutes for reading the question paper.

TEAR HERE TO OPEN THE QUESTION PAPER

ಪ್ರಶ್ನೆ-ಪತ್ರಿಕೆಯನ್ನು ತೆರೆಯಲು ಇಲ್ಲಿ ಕತ್ತರಿಸಿ

Tear here

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[Turn over

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 term selecting from the choices given in the brackets : 10 × 1 = 10
- a) The core of a transformer is made of
(*silicon steel, cast steel, cast iron*)
 - b) The function of commutator in a *d.c.* generator is to convert
(*d.c. to a.c., a.c. to d.c., both*)
 - c) Hydro-electric power is first generated in our state
(*Jog, Supa, Shivanasamudra*)
 - d) The current coil of wattmeter is connected in
(*parallel, series, series-parallel*)
 - e) The value of form factor of an *a.c.* quantity is
(*1.11, 1.414, 0.707*)
 - f) Super heater is used to
(*increase the temperature of steam, increase the temperature of water, increase the pressure of steam*)
 - g) Gear pump is an example of
(*rotary pump, reciprocating pump, jet pump*)
 - h) Spark plug is used in
(*diesel engine, petrol engine, jet engine*)
 - i) Water turbines are used in
(*thermal power plant, nuclear power plant, hydro-electric power plant*)
 - j) The part connects lower part of the piston and crank shaft is
(*crank shaft, connecting rod, fly wheel*)
2. a) What are boiler accessories ? 2
 b) List the boiler mountings. 2
 c) Draw a neat sketch of Cochran boiler and label the important parts. 6

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3. a) How are the turbines classified ? 2
b) Mention the uses of pumps. 2
c) Draw a neat sketch of Pelton wheel and explain briefly. 6
4. a) List the parts of petrol engine and diesel engine. 2
b) Differentiate between two-stroke engine and four-stroke engine. 2
c) Draw a neat sketch of four-stroke diesel engine and explain briefly. 6

SECTION – B

Instruction : Answer any two full questions of the following.

5. a) What is a *d.c.* generator ? 2
b) Explain the working principle of transformer. 3
c) Draw a neat diagram of *d.c.* motor and label the parts. 5
6. a) Define transformer. 2
b) Mention the applications of an alternator. 3
c) Draw a sine wave curve and mark the following : 5
(i) Cycle, (ii) Time period, (iii) Maximum value.
7. a) What is an alternator ? 2
b) Name the different types of *d.c.* generator. 3
c) Explain with neat sketch the squirrel cage induction motor. 5
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