

Sl. No. : OP

ಒಟ್ಟು ಪ್ರಶ್ನೆಗಳ ಸಂಖ್ಯೆ : 7 ]

**CCE RR**

[ 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**

( ಹೊಸ ಪಠ್ಯಕ್ರಮ / New Syllabus )

( ಪುನರಾವರ್ತಿತ ಶಾಲಾ ಅಭ್ಯರ್ಥಿ / Regular Repeater )

ದಿನಾಂಕ : 17. 06. 2017 ]

[ Date : 17. 06. 2017

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

**RR-XXIII-8019**

[ 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 maximum value of an *a.c.* quantity is known as .....  
( *amplitude, rms value, average value* )
  - b) An electrically earthing is necessary through the wiring installation in .....  
( *cleat system, CTS system, metal conduit system* )
  - c) Wattmeter consists of .....  
( *current coil & resistive coil, current coil & pressure coil, current coil & inductive coil* )
  - d) The motor should not be started without some mechanical load in .....  
( *series motor, compound motor, shunt motor* )
  - e) A transformer works on the principle of .....  
( *self induction, mutual induction, dynamic induction* )
  - f) The function of ..... is to produce inflammable mixture of petrol vapour and air necessary for the working of petrol engine.  
( *carburettor, atomiser, spark plug* )
  - g) Fusible plug is used to save the boiler against .....  
( *low water level, excess pressure of steam, overheating* )
  - h) The material used for cylinder head of an internal combustion engine is .....  
( *steel alloys, cast iron, mild steel* )
  - i) The pump which is used for irrigation purpose is .....  
( *reciprocating pump, centrifugal pump, rotary pump* )
  - j) The platform over which the fuel burning occurred in a boiler is .....  
( *ash pit, grate, fusible plug* )
2.
  - a) State Faraday's laws of electromagnetic induction. 2
  - b) Name the types of self excited *d.c.* generators. 3
  - c) What is *d.c.* motor ? Mention any three applications of it. 5

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3. a) Define frequency and mention its unit. 2  
b) List any three advantages of squirrel cage induction motor. 3  
c) Draw a neat circuit diagram of fluorescent lamp and explain briefly. 5
4. a) Mention the sources required for the generation of hydro-electric power and thermal power. 2  
b) Draw a neat sketch of electric bell and label the parts. 4  
c) Write short notes on any *two* of the following : 4  
i) Back e.m.f.  
ii) Transformer  
iii) Indoor wiring.

**SECTION - B**

*Instruction : Answer any two full questions of the following.*

5. a) What is the function of a boiler ? 2  
b) Why the pressure gauge is used in boiler ? 2  
c) Draw a neat sketch of locomotive boiler and describe briefly. 6
6. a) Define heat engine. 2  
b) Differentiate between two stroke engine and four stroke engine. 2  
c) Explain with a neat sketch the working principle of simple carburettor. 6
7. a) How the turbines are classified ? 2  
b) State the advantages of centrifugal pump over a reciprocating pump. 2  
c) Describe with a line diagram the working of Pelton wheel. 6
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