

**A**

Sl. No. : YYY

ಒಟ್ಟು ಪ್ರಶ್ನೆಗಳ ಸಂಖ್ಯೆ : 10 ]

Total No. of Questions : 10 ]

ಸಂಕೇತ ಸಂಖ್ಯೆ : **71****CCE RR  
REVISED**

[ ಒಟ್ಟು ಮುದ್ರಿತ ಪುಟಗಳ ಸಂಖ್ಯೆ : 4

[ Total No. of Printed Pages : 4

**Code No. : 71**

ಇಲ್ಲಿಂದ ಕತ್ತರಿಸಿ

ವಿಷಯ : ಎಲಿಮೆಂಟ್ಸ್ ಆಫ್ ಮೆಕ್ಯಾನಿಕಲ್ ಅಂಡ್

ಎಲೆಕ್ಟ್ರಿಕಲ್ ಇಂಜಿನಿಯರಿಂಗ್ - 2

**Subject : ELEMENTS OF MECHANICAL AND  
ELECTRICAL ENGINEERING-2**

( ಹೊಸ ಪಠ್ಯಕ್ರಮ / New Syllabus )

( ಪ್ರನವಾರ್ತಿಸ್ತ ಶಾಲಾ ಅಭ್ಯರ್ಥಿ / Regular Repeater )

ದಿನಾಂಕ : 23. 06. 2018 ]

[ Date : 23. 06. 2018

ಸಮಯ : ಬೆಳಿಗ್ಗೆ 9-30 ರಿಂದ ಮಧ್ಯಾಹ್ನ-12-45 ರವರೆಗೆ ] [ Time : 9-30 A.M. to 12-45 P.M.

ಪರಮಾವಧಿ ಅಂಕಗಳು : 100 ]

[ Max. Marks : 100

**General Instructions to the Candidate :**

1. This Question Paper consists of 10 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.

**RR(A)-10005**

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TEAR HERE TO OPEN THE QUESTION PAPER

ಪ್ರಶ್ನೆಪತ್ರಿಕೆಯನ್ನು ತೆರೆಯಲು ಇಲ್ಲಿ ಕತ್ತರಿಸಿ

Tear here

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

### SECTION – A

*Note :* Answer *all* the questions.

1. a) List the applications of I.C. engines. 2  
b) Differentiate between two-stroke engine and four-stroke engine. 3  
c) With a neat sketch show the different parts of an I.C. engine. 5
2. a) How are the air compressors classified ? 2  
b) Mention the applications of air compressor. 3  
c) Draw a neat sketch of single stage single acting air compressor and explain briefly. 5
3. a) How are the air conditioning systems classified ? 2  
b) What are the desirable properties of a good refrigerant ? 3  
c) With a neat sketch show the following parts of a summer air conditioning system :  
i) Filter  
ii) Heating coil  
iii) Fan. 5
4. a) What is taper turning ? 2  
b) List the important parts of a lathe. 3  
c) With a line diagram show the specifications of lathe. 5

OR

- a) What is milling ? 2  
b) What are the operations to be carried out in a milling machine ? 3  
c) With a neat sketch explain the following drilling machine operations :  
i) Counter sinking  
ii) Spot facing. 5
5. a) How are the welding processes classified ? 2  
b) List the different equipment and accessories used in electric arc welding. 3  
c) Draw a neat sketch of oxidizing flame and explain briefly. 5

**SECTION – B**

*Note : Answer all the questions.*

6. a) Name the different types of *emfs*. 2  
b) State Faraday's laws of electromagnetic induction. 3  
c) Draw a neat diagram of self induced *emf* and mutually induced *emf*. 5
7. a) Define *rms* value. 2  
b) Draw a sinusoidal waveform and mark the following :  
i) Cycle  
ii) Maximum value. 3  
c) Define and mention the units of the following :  
i) Frequency  
ii) Time period. 5
8. a) List the main parts of an alternator. 2  
b) Mention different types of *d.c.* generator. 3  
c) Draw a neat sketch of transformer and label the parts. 5
- OR
- a) Mention the applications of *d.c.* shunt motor. 2  
b) Write short notes on :  
i) Step-up transformer  
ii) Step-down transformer. 3  
c) With a neat sketch show the following parts of a *d.c.* generator :  
i) Yoke  
ii) Field poles  
iii) Armature. 5
9. a) What are the tools required for assembling of an *a.c.* ceiling fan ? 2  
b) List the possible faults of *a.c.* ceiling fan. 3  
c) Draw a neat sketch of an electric bell and label the parts. 5
10. a) What is an integrated circuit ? 2  
b) Mention the applications of transistor. 3  
c) Draw a neat sketch of *PNP* transistor and explain briefly. 5
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