

ಒಟ್ಟು ಮುದ್ರಿತ ಪುಟಗಳ ಸಂಖ್ಯೆ : 8]
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ಒಟ್ಟು ಪ್ರಶ್ನೆಗಳ ಸಂಖ್ಯೆ : 10]
Total No. of Questions : 10]

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Question Paper Serial No. **600**

ಸಂಕೇತ ಸಂಖ್ಯೆ : **71**

Code No. : 71

ವಿಷಯ : ಎಲಿಮೆಂಟ್ಸ್ ಆಫ್ ಮೆಕ್ಯಾನಿಕಲ್ ಅಂಡ್

ಎಲೆಕ್ಟ್ರಿಕಲ್ ಇಂಜಿನಿಯರಿಂಗ್ - 2

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

(ಪುನರಾವರ್ತಿತ ಶಾಲಾ ಅಭ್ಯರ್ಥಿ / Regular Repeater)

ದಿನಾಂಕ : 02. 07. 2022]

[Date : 02. 07. 2022

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.

600



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ಇಲ್ಲಿಂದ ಕತ್ತರಿಸಿ

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) Define E.C. engine. 2

- b) Explain the function of connecting rod in an internal combustion engine. 3

- c) Draw a neat sketch of four-stroke diesel engine and label the parts. 5

2. a) Define air compressor. 2

- b) Write the classification of air compressor. 3



- c) Draw a neat sketch of reciprocating air compressor and label the parts.  5

3. a) What is a refrigerant ?  2

- b) What are the desirable properties required for a good refrigerant ?  3

- 
- c) Draw a neat sketch of vapour compression refrigerator and label the parts.  5

4. a) List the important parts of refrigeration system.  2

- b) Mention the uses of air compressor. 3

- c) Draw a neat sketch of summer air-conditioning system and label the parts.  5



5. a) Define taper. 2
- 
- b) What are the specifications required to purchase a lathe? 3
- c) With a neat sketch explain step turning operation carried out in a lathe. 5

OR



-  a) Define drilling. 2
- b) Mention the different operations carried out in a drilling machine. 3
- 
- c) With a neat sketch explain tapping operation carried out in a drilling machine. 5
- 
6. a) Classify the IC engines according to the position of cylinders. 2
- b) Explain the use of piston rings in an internal combustion engine. 3
- 



- c) With a neat sketch, explain facing operation carried out in a lathe.



5

**SECTION - B**

Note : Answer all the questions.



7. a) List the types of induced *e.m.f.* 2
- b) Explain the term self-induced *e.m.f.* 3
- c) Draw a neat sketch of electromagnetic induction and label the parts. 5
8. a) What is meant by AC ? 2
- b) Describe electrical power and also mention its SI unit. 3



- c) Draw a neat diagram of sine wave and mark the following : 5
- i) Amplitude 
- ii) Cycle.
9. a) Define the term electromagnetic induction. 2
- b) State Fleming's Right Hand Rule.  3
- c) Explain with a neat diagram, working of mutually induced *e.m.f.*  5
10. a) List the types of electric iron. 2
- b) Define the term Reverse bias.  3
- c) Draw a neat diagram of an electric bell and label the parts. 5

OR



a) Mention the types of extrinsic semiconductor.



2

b) Explain the function of thermostat.

3

c) Draw the neat symbols of PNP and NPN transistors and explain

any one.



5



