

Roll
No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Serial No. of
G. 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

ವಿಷಯ : ಎಲಿಮೆಂಟ್ಸ್ ಆಫ್ ಇಂಜಿನಿಯರಿಂಗ್

Code No. : 71

Subject : ELEMENTS OF ENGINEERING

ದಿನಾಂಕ : 02. 04. 2011]

[Date : 02. 04. 2011

ಸಮಯ : ಬೆಳಿಗ್ಗೆ 10-30 ರಿಂದ ಮಧ್ಯಾಹ್ನ-1-15 ರವರೆಗೆ]

[Time : 10-30 A.M. to 1-15 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. ✓								✓	
<i>Signature of Evaluators</i>				<i>Registration No.</i>		<i>Signature of the Deputy Chief</i>		<i>Signature of the Room Invigilator</i>	

[Turn over

General Instructions :

- i) The Question-cum-Answer Booklet consists of objective and subjective types of questions having 7 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 have 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) Hydroelectric power is generated by using

(*flowing water, fuel coal, wind power*)

Ans : _____

- b) A smaller auxiliary electrode used in mercury vapour lamp is called

(*starting electrode, initiating electrode, limiting electrode*)

Ans : _____

c) The generation of alternating current is usually

(*single phase, two phase, three phase*)

Ans : _____

d) The generator which provides approximately constant voltage from no load to full load is

(*series generator, shunt generator, compound generator*)

Ans : _____

e) A transformer works on the principle of

(*self- induction, mutual induction, dynamically induced e.m.f.*)

Ans : _____

f) prevents the explosion of the boiler due to increase in the internal pressure.

(*Safety valve, Stop valve, Blow off valve*)

Ans : _____

g) The I.H.P. of the engine is the B.H.P.

(*equal to, less than, more than*)

Ans : _____

h) Spur gears are used to transmit power from one shaft to another shaft whose axes are

(*perpendicular, parallel, inclined*)

Ans : _____

[Turn over

b) Name the two types of insulation used in electric power transmission lines. 2

c) State Flemings right hand rule and where it is employed. 4

[Turn over

3. a) What is a motor ? 2

- b) Draw a neat sketch of DC generator and label its important parts. 5

c) What is a back e.m.f. ?

3

4. a) With a neat diagram explain the construction and operation of thermostat. 5

SECTION – B

Instruction : Answer any two full questions of the following.

- 5. a) Define a boiler. 2

[Turn over

b) What is the function of a boiler ?

2

c) Describe with a neat sketch the Cochran boiler.

6

6. a) Define a pump.

2

[Turn over

b) Mention the uses of pumps. 2

c) Describe with a line diagram the working of a reciprocating pump. 6

7. a) What is the function of jockey pulley in belt drive method of power transmission ? 2

- b) Describe with a neat sketch the principle of working of a four-stroke diesel engine. 5

c) Write short notes on :

$$2 \times 1\frac{1}{2} = 3$$

(i) Fusible plug

(ii) Pressure gauge.
