

CCE-III-RR/PF(A)/111/7153

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ಆಗಸ್ಟ್ 2024 ರ ಪರೀಕ್ಷೆ-3
AUGUST 2024 EXAMINATION-3

ಒಟ್ಟು ಮುದ್ರಿತ ಪುಟಗಳ ಸಂಖ್ಯೆ : 8]

Total No. of Printed Pages : 8]

ಒಟ್ಟು ಪ್ರಶ್ನೆಗಳ ಸಂಖ್ಯೆ : 8]

Total No. of Questions : 8]

**CCE RR/PF
FULL SYLLABUS**

Question Paper Serial No.

ಸಂಕೇತ ಸಂಖ್ಯೆ : **52**

Code No. : **52**

ವಿಷಯ : ಎಲಿಮೆಂಟ್ಸ್ ಆಫ್ ಮೆಕ್ಯಾನಿಕಲ್ ಇಂಜಿನಿಯರಿಂಗ್ - IV

Subject : **ELEMENTS OF MECHANICAL ENGINEERING - IV**

(ಶಾಲಾ ಪುನರಾವರ್ತಿತ ಅಭ್ಯರ್ಥಿ / ಖಾಸಗಿ ಅಭ್ಯರ್ಥಿ)
(Regular Repeater / Private Fresh)

ದಿನಾಂಕ : 09. 08. 2024]

[Date : 09. 08. 2024

ಸಮಯ : ಬೆಳಿಗ್ಗೆ 10-15 ರಿಂದ ಮಧ್ಯಾಹ್ನ 1-30 ರವರೆಗೆ] [Time : 10-15 A.M. to 1-30 P.M.

ಗರಿಷ್ಠ ಅಂಕಗಳು : 80]

[Max. Marks : 80

General Instructions to the Candidate :

Cut here / ಇಲ್ಲಿ ಕತ್ತರಿಸಿ

1. This question paper consists of 8 questions in all.
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 (**Follow the arrow**). **Do not cut the left side to open the paper**. Check whether all the pages of the question paper are intact.
3. Follow the instructions given against the questions.
4. Figures in the right hand margin indicate maximum marks for the questions.
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.
6. Ensure that the Version of the question paper distributed to you and the Version printed on your admission ticket is the same.

1 of 8

ಇಲ್ಲಿಂದ ಕತ್ತರಿಸಿ

09. 08. 2024

TEAR HERE TO OPEN THE QUESTION PAPER

ಇಲ್ಲಿಂದ ಕತ್ತರಿಸಿ

Tear here

Note : i) Answer *all* the questions.

ii) Drawing should be drawn in drawing sheet only.

iii) All dimensions are in mm.

1. **Four alternatives are given for each of the following questions / incomplete statements. Select the most appropriate alternative and write it in the answer book along**

with its alphabet :



10 × 1 = 10

i) Spark plug is used in

(A) Diesel engine

(B) Petrol engine

(C) Oil engine

(D) Electric engine

ii) The backbone of an I.C. engine is

(A) Piston

(B) Camshaft

(C) Crankshaft

(D) Valve



iii) Sump for the lubricating oil in the I.C. engine is

(A) Flywheel

(B) Crankcase

(C) Valve



(D) Piston ring

iv) Which machine tool is known as the mother of all machine tools ?



- (A) Milling
- (B) Shaping
- (C) Drill
- (D) Lathe

v) Producing a circular hole in a solid metal by means of revolving tool is known as

- (A) Drilling
- (B) Reaming
- (C) Boring
- (D) Facing



vi) If both front and top views of a plane are straight lines, the true shape will lie on

- (A) Profile plane
- (B) Horizontal plane
- (C) Vertical plane
- (D) Inclined plane

vii) A plane surface has



- (A) Three dimensions
- (B) Two dimensions
- (C) Four dimensions
- (D) Five dimensions

viii) If a plane is perpendicular to one of the principal planes,

the projection on that plane will be



- (A) Straight line
- (B) Curved line
- (C) Inclined line
- (D) Perpendicular line

ix) Among the following solids a regular polyhedron is

- (A) Square prism
- (B) Square pyramid
- (C) Cube
- (D) Sphere






x) In orthographic projection, each projection view represents how many dimensions of an object ?

- (A) 1
- (B) 2
- (C) 4
- (D) 3



- 2. a) List the different methods of I.C. engine ignition system. 2
- b) Mention the important parts of an I.C. engine. 3
- c) Differentiate between two-stroke and four-stroke engines. 5

3. a) Mention the compression ratios of petrol and diesel engines. 2
- 
- b) Explain plain turning operation carried out on the lathe. 3
- c) With a neat sketch, explain four-stroke diesel engine. 5
4. a) List the different parts of the lathe. 2
- b) Mention the different types of drilling machines. 3
- c) Explain the process of drilling in a drilling machine. 5
5. a) Explain with a neat sketch of the following operations carried out on a lathe : 5
- 
- i) Taper turning
- ii) Thread cutting
- b) A pentagonal plane lamina of sides 30 mm is resting on H.P. with one of its corners touching it such that the plane surface makes an angle of 60° with H.P. Draw its top and front views. 5
6. a) A circular lamina of 60 mm diameter rests on H.P. such that the surface of the lamina is inclined at 30° to H.P. Draw its top and front views. 5
- 
- b) Draw the projections of a cylinder of 50 mm diameter of base and height 60 mm resting with its base on H.P. 5

7. A hexagonal pyramid of 25 mm side of base and height 60 mm rests with one of its base edges on H.P. such that the base is inclined at 45° to H.P. and the axis parallel to V.P. Draw the top and front views.



10

8. The pictorial view of an object is shown in Figure No. 1. Draw the following orthographic views and mark the dimensions :

- i) Front view — Looking in the direction of arrow 'X'
- ii) Top view — Looking in the direction of arrow 'Y'
- iii) Side view — Looking in the direction of arrow 'Z'.

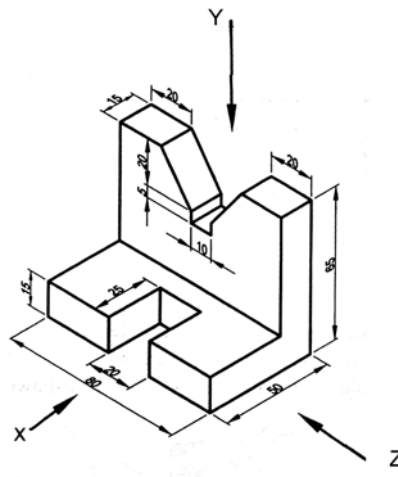


Figure No. 1

OR

The orthographic views of an object are shown in Figure No. 2.

Draw the isometric projection of the object.

10

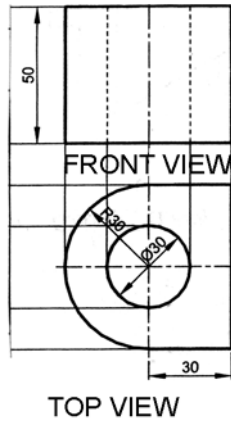


Figure No. 2

DO NOT WRITE ANYTHING HERE