

CCE-II-RR/PF(A)/888/4030

A

ಜೂನ್ 2024 ರ ಪರೀಕ್ಷೆ - 2
JUNE 2024 EXAMINATION - 2

Question Paper Serial No.

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**

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 : 19. 06. 2024]

[Date : 19. 06. 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

TEAR HERE TO OPEN THE QUESTION PAPER

ಇಲ್ಲಿಂದ ಕತ್ತರಿಸಿ


19. 06. 2024

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 :**  $10 \times 1 = 10$


i) Number of strokes required to complete one working cycle in four-stroke engine is

- (A) Two strokes (B) Four strokes
(C) One stroke (D) Five strokes

ii) The intake charge in a diesel engine consists of

- (A) Air only (B) Air and petrol
(C) Air and lubricant (D) Air and fuel 

iii) Petrol engine is

- (A) Compression ignition engine
(B) Spark ignition engine
(C) Mixed ignition engine
(D) Steam engine 

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



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

v) Bench drilling machine is also known as

- (A) Pillar drilling machine
- (B) Radial drilling machine
- (C) Sensitive drilling machine
- (D) Portable drilling machine



vi) A plane surface has

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

vii) If the plane is perpendicular to one of the principal planes the projection on that plane will be

- (A) Line
- (B) Straight line
- (C) Curve
- (D) Perpendicular line



viii) The top view of a circular disc inclined to H.P. and parallel

to V.P. is



- (A) A circle
- (B) An ellipse
- (C) A line
- (D) A point

ix) A solid has

- (A) Three dimensions
- (B) Two dimensions
- (C) Four dimensions
- (D) One dimension

x) The projection on Horizontal Plane (H.P.) is






- (A) Front view
- (B) Right side view
- (C) Left side view
- (D) Top view

2. a) List the different parts of internal combustion engines. 2



b) Explain the working stroke of a four-stroke diesel engine. 3

c) Differentiate between petrol engine and diesel engine. 5

3. a) Explain the internal combustion and external combustion engines with examples.  2
- b) Explain turning operation carried out in the lathe. 3
- c) With a neat sketch explain four-stroke petrol engine. 5
4. a) List the different types of lathe operations. 2
- b) Explain thread cutting operation on a lathe. 3
- c) Draw a line diagram of lathe and label the parts. 5
5. a) Explain the following lathe operations :  5
- i) Knurling
- ii) Facing
- b) A square lamina $ABCD$ of 30 mm sides rests on the corner C , such that the diagonal AC is inclined at 45° to H.P. Draw its top and front views.  5
6. a) A pentagonal plane lamina of sides 30 mm is resting on H.P. with one of its corner touching it such that the plane surface makes an angle of 60° with H.P. Draw its top and front views. 5
- b) Draw the projections of a cone of 50 mm diameter of base and 60 mm height when it rests with its base on H.P. 5

7. A pentagonal prism of 30 mm side of base and height 60 mm rests with one of its edges of the base on H.P. such that the axis is inclined 30° to H.P. and 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 :

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

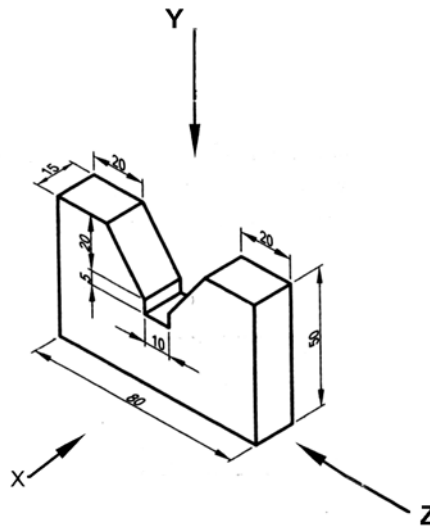


Figure No. 1

OR



DO NOT WRITE ANYTHING HERE