

## MAHARASHTRA STATE BOARD OF SKILL DEVELOPMENT EXAMINATION, MUMBAI

Examination—July, 2020

CERTIFICATE COURSE IN WELDER CUM FABRICATOR

[ १२५—३ ]

(BETHE MBE—100)

१२५ (BETHE MBE—100) (125+02)

१२५ :- १२५/१२५ १२५/१२५.

MBE

1. (+) १२५/१२५ १२५/१२५ (BETHE MBE) :-

5

(1) १ १२५/१२५ = ..... १२५/१२५

(2) १२५/१२५ १२५/१२५. १२५/१२५. (१२५/१२५ ..... १२५/१२५ + १२५/१२५)

(3) ६.२५ १२५/१२५ = .....

(4) ६५० १२५ २० १२५/१२५ १२५/१२५ = .....

(5) १२५/१२५ १२५/१२५ १२५/१२५ = .....

(6) १२५/१२५ १२५/१२५ १२५/१२५ १२५/१२५ १२५/१२५ ..... १२५/१२५ (१२५/१२५ १२५/१२५).

(२) १२५/१२५ १२५/१२५ (BETHE MBE) :-

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(1) १० १२५/१२५ १२५/१२५ १२५/१२५ १२५/१२५ १२५/१२५.

(2) (१२५/१२५ १२५/१२५ १२५/१२५ १२५/१२५ ३.४५ + १२५/१२५)

(3) (१२५/१२५ १२५/१२५ + १२५/१२५)

(4) १२५/१२५. १२५/१२५. (१२५/१२५ १२५/१२५ १२५/१२५ १२५/१२५ १२५/१२५ + १२५/१२५)

(5) (१२५/१२५ १२५/१२५ १२५/१२५ १२५/१२५ १२५/१२५ १२५/१२५ + १२५/१२५)

(6) -३, -८ हे अंक आलेखाच्या दुसऱ्या चरणात काढतात.

(E) १२५/१२५ १२५/१२५ १२५/१२५ १२५/१२५ (BETHE MBE) :-

5

(1) ०००

(2) ०B<sub>10</sub>(3) [ B<sub>10</sub> ]<sup>2</sup>(4) B<sub>10</sub>. E<sub>10</sub>. B<sub>10</sub>.(5) B<sub>10</sub>. ०००. B<sub>10</sub>.(6) +१२५. B<sub>10</sub>. +१२५.

(b) १२५/१२५ १२५/१२५ :-

5

१२५/१२५

१२५/१२५ (१२५/१२५) १२५/१२५

(1) १,००० ०००

(+) १,००० १२५/१२५

(2) १० १२५/१२५ १२५/१२५

(२) (१२५/१२५)<sup>3</sup>

(3) १ १२५

(E) १ १२५/१२५

(4) १२५/१२५ १२५/१२५ १२५/१२५

(b) 4/3 π R<sup>3</sup>

(5) १२५/१२५ १२५/१२५ १२५/१२५

(c) १ १२५/१२५ १२५/१२५

[ = + ] १२५/१२५

2. Eðhæfingunni er búið :-

16

(+) BC°SÖ Eöfið Eðfð.-

$$\frac{3 \times (-5)}{10} + \frac{x+3}{2} = 22$$

(+) 338.56 Ska EMQÖy Eðfð.

(Eö) X Y SÖ Eöfið Eðfð.

$$\frac{X+3Y}{6} = 1.5 : \frac{2X-Y}{2} = 2$$

(b) 37°C Ska qEEM®i°F EvafEö®ü.

3. Eðhæfingunni er búið :-

16

(+) BEö Eð°]ÖM 18 EöffEö®ü 12 EöffEö®ü ÷ 10 EöffEö®ü Saff öf/öaffEö®ü Eö®ü  
[EöfEö®ü vEöfEö®ü Eö°]ÖM EvafEö®ü Eö®ü Eðfð.

(+) vEöfEö®ü ; EöfEö®ü MÖvE®ü Eö®ü Eö®ü.

(Eö) = hEöfEö®ü Eö®ü Eö®ü.

(b) Eö®ü ]öfEö®ü öf/öaffEö®ü Eö®ü.-

$$\frac{351.2 \times 3.028}{0.319 \times 36.58}$$

4. Eðhæfingunni er búið :-

16

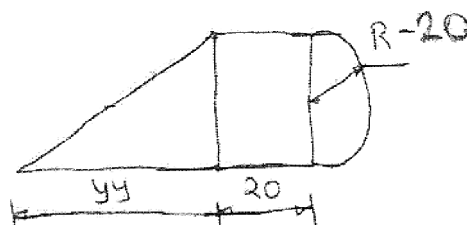
(+) ; ö®Eö®ü Eö®ü.-

(1) +vEö®ü Eö®ü +Eö®ü xEöfEö®ü Eö®ü

(2) = hEöfEö®ü +Eö®ü iEö®ü Eö®ü.

(+) BEö 30 × 40 × 10 EöfEö®ü]ö®ü öf/öaffEö®ü 36 vEö®ü 1/2 EöfEö®ü]ö®ü öf/öaffEö®ü  
[EöbEö®ü iEö®ü = Eö®ü öf/öaffEö®ü]ö®ü öf/öaffEö®ü ; ö³y Eðfð.

(Eö) JöfEö®ü +Eö®ü SöafEö®ü ; ö³y Eðfð.



(öf/öaffEö®ü EöfEö®ü]ö®ü öf/öaffEö®ü)

(b) vEöfEö®ü +Eö®ü +vEöfEö®ü Evö®ü ; ö®Eö®ü Eö®ü.

5.  $E\{b_i^2 | a_i^2 = 0\} = E\{b_i^2 | E\{b_i^2\} = 0\} :-$

(+)  $b_i^2 + x b_i^2 = 0 \{b_i^2\}$

(+)  $x^2 = 1/2$

(E)  $+1/2 C + 1/2 i \{E\}$

(b)  $E\{a_i^2 | a_i^2 = 0\}$

(<)  $E\{b_i^2 | E\{b_i^2\} = 0\}$

6.  $J\{E\{b_i^2\} + E\{b_i^2\} = 0\} = E\{b_i^2 | a_i^2 = 0\} = E\{b_i^2 | E\{b_i^2\} = 0\} :-$

(+)  $x^2 = 1/2$

(+)  $G\{b_i^2 | E\{b_i^2\} = 0\}$

(E)  $< x^2 = 0 \{b_i^2 + 1/2 i \{E\}\}$

(b)  $+1/2 b_i^2 = E\{b_i^2 | E\{b_i^2\} = 0\}$

**(ENGLISH)**

[ TIME ALLOWED—3 HOURS ]

(MARKS—100)

**WORKSHOP CALCULATION AND DRAWING (TH-II)****Note.**—Attempt all questions.**Marks**1. (a) Fill in the blanks (any *five*) :—

5

(i) 1 meter = ..... foot.

(ii) The unit of Mass in CGS system is .....

(iii) Square of 6.25 is .....

(iv) 20% of 650 is .....

(v) Area of circle is .....

(vi) Initial work and construction lines are drawn by using  
..... grade pencil.(b) *True or false* (any *five*) :—

5

(i) 10 mm is equal to 100 micron.

(ii) The numerical value of  $\pi$  is equal to 3.45.

(iii) Mercury is a metal.

(iv) S. I. unit of length is centimeter.

(v) Boiling point of water is 100<sup>o</sup>f.(v) The units -3, -8 will be plotted in II<sup>nd</sup> quadrant.(c) Write down long form of below terms (any *five*) :—

5

(i) <sup>o</sup>C(ii) <sup>o</sup>F(iii) M<sup>2</sup>

(iv) M. K. S.

(v) L. C. M

(vi) I. S. I.

(d) Match the pair :—

5

**'Metal'****'Flame'**

(i) 1,000 gms

(a) 1,000 kgs.

(ii) 10 mm

(b) (Side)<sup>3</sup>

(iii) 1 tonne

(c) 1 kg.

(iv) Volume of Cube

(d)  $\frac{4}{3} \pi R^3$ 

(v) Volume of Sphere

(e) 1 cm

[ Turn over

2. Attempt any *two* of the following :—

16

(a) Find the value of X

$$\frac{3 \times (-5)}{10} + \frac{x + 3}{2} = 22$$

(b) Find the square root of 338.56

(c) Find the value of X and Y

$$\frac{X + 3Y}{6} = 1.5 : \frac{2X - Y}{2} = 2$$

(d) Convert 37°C into °F.

3. Attempt any *two* of the following :—

16

(a) A casting is made with 18 kgs copper, 12 kgs lead and 10 kgs zinc. Calculate the percentage of metal in the casting.

(b) Write down physical properties of metal .

(c) What do you know about Heat treatment.

(d) Solve by using log table.

$$\frac{351.2 \times 3.028}{0.319 \times 36.58}$$

4. Attempt any *two* of the following :—

16

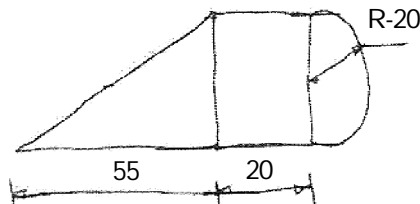
(a) Difference between.—

(i) Annealing and normalizing

(ii) Heat and temperature.

(b) 30 x 40 x 10 mm steel plate has 36 drill holes of 2 mm diameter each. Find the volume of the remaining steel plate.

(c) Calculate the area of below figure.—



(All dimensions are in mm.)

(d) Difference between metal and non-metal.

5. Draw free hand sketch (any *four*) :— 16
- (a) Double ended spanner
  - (b) Anvil
  - (c) Earth Clamp
  - (d) Wire brush
  - (e) Ball pein hammer
6. Draw free hand sketch (any *two*) :— 16
- (a) Bench vice and show main parts.
  - (b) Cross pein hammer and show main part.
  - (c) Inside caliper and show its main parts.
  - (d) Odd leg caliper and show its main parts.
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