

**MAHARASHTRA STATE BOARD OF SKILL DEVELOPMENT EXAMINATION, MUMBAI**

**Examination--July, 2020**

CERTIFICATE COURSE IN AUTOMOBILES ENGINEERING

[**Ἐ**ϣ—3 iEE<sup>o</sup>E]

(BEÚHÉ ~~MÖÉ~~—100)

[illegible]
$$\textcircled{\text{B}}\text{E}\text{X}\text{E}.\text{---}(1) \textcircled{\text{E}}\text{E}\text{C}\text{I}\text{E}\text{X}\text{E} + \textcircled{\text{E}}\text{E}\text{I}\text{E}\text{E}\text{O} + \textcircled{\text{E}}\text{I}\text{E}.$$
$$(2) \quad +\dot{E}^{\dot{e}}_1 \dot{E}^0_0 \dot{i} \dot{E}^0_a \dot{o} \dot{E}^0_0 + \dot{E}^{\dot{e}}_0 \dot{E}^{\dot{e}}_1 \dot{E}^{\dot{e}}_0 \dot{E}^{\dot{e}}_1.$$

(3) = VÉ ÉOÈòbè+É +Æò {ÉÉÉC MÖÉ nqÉÉ ÉíÉÉíÉ.

# NİĞE

1. (+) E<sup>®</sup>E<sup>®</sup>aE<sup>®</sup>VÉÉMÉO aEÉMPÉ QÉ-mù;E<sup>®</sup>Q (Eòéhé:Eá2D) {EÉSÉ} :-

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[illegible]

(+)  $\text{E}^{\text{R}}\text{U}^{\text{O}}\{\text{E}^{\text{R}}\text{U}^{\text{O}}\}$       (4)  $+ \text{bV}[\text{E}^{\text{R}}]\text{U}^{\text{O}}\{\text{E}^{\text{R}}\text{U}^{\text{O}}\}$       (E0)  $\text{U}^{\text{R}}\text{E}^{\text{R}}\text{U}^{\text{R}}$

(2) Taboulet et Vélizy ont été condamnés à 30 (± 10) € de dommages et intérêts à payer à l'État.

[illegible]

(3) Ê®ÜÊÉÊÊGòªÊäÊvªÊä.....

(+)  $V_{\text{eff}}^{\text{eff}} + f_{\text{eff}}^{\text{eff}} ] \otimes E_0^{\text{eff}}$  (d)  $V_{\text{eff}}^{\text{eff}} \otimes f_{\text{eff}}^{\text{eff}} ] \otimes E_0^{\text{eff}}$   
 (E)  $V_{\text{eff}}^{\text{eff}} E_0^{\text{eff}} ] \otimes E_0^{\text{eff}}$ .

(4) <+0> MEXICO ; ENEA ENVOI VEEBHO EN TAPPE ..... SEE EE®UE®UEE.

(+) 0ffäbē®mē                      (±) vffāzēmē                      (E0) ÊSÉE(É)MÉ.

(5) 0GÜ {EÖSÉ "ÉÉVÉh"ÉÉ"ÉÉ" 0 ..... ÉÉÉ®ÉÉÉÉ.

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[illegible]

(+)  $60^0$                       (E)  $90^0$                       (E)  $45^0$ .

(၁၆) JHE+FO+É É ÉVÉÉÉÉ SÉHò Eò) ~~É~~ ~~É~~ ÉÉÉÉÉÉÉÉÉÉ (ÉÉÉÉÉÉÉÉÉ) {ÉÉÉ} :-

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[illegible]

(2)  $\{E_1^{aE} + E^E \bar{E}^E E^E + E E d^{\otimes R} u n i t X E E + E^E E^E \bar{E}^E \cdot \partial \circ \} \bar{E}^E E^E E^E E^E E^E E^E E^E E^E$ .

$$(3) \quad E_{\frac{1}{2}}(E^{\otimes n}) = \{e^{a_1} e^{a_2} \dots e^{a_n} : \sum_{i=1}^n a_i \leq n-1\}$$
[illegible]

(5)  $\{e_i\}_{i \in \mathbb{N}}$  is a sequence of elements of  $\mathcal{H}$  such that  $\sum_{i \in \mathbb{N}} \|e_i\|^2 < \infty$ . Then  $\sum_{i \in \mathbb{N}} e_i$  is a well-defined element of  $\mathcal{H}$ .

[illegible]

(Eò) {ÉFò+É °ÓÆÉ °{É¹] òEò®É (EòhÉ¹aÉÉ½ò) {ÉÉÉ) :—

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(1)  $\{E^{(0)}_{1/2}\} \cap ME$       (2)  $\frac{1}{2}E^{(0)}_{1/2} \cap ME$       (3)  $\{E^{(0)}_{1/2}\} \cap ME$

(4)  $\text{if } \langle \bar{c}, \bar{e} \rangle \in E$  (5)  $\bar{c} \neq \bar{e}$  (6)  $\text{if } \bar{c} \neq \bar{e}$  (7)  $\text{if } \bar{c} \neq \bar{e}$

$$[\pm \epsilon] \cup \{\epsilon/2\}$$



(ENGLISH)

[ TIME ALLOWED—3 HOURS ]

(MARKS—100)

**BASIC FITTING, MEASUREMENTS SHEET METAL AND WELDING (THEORY-II)***Instructions.*— (1) All questions are *compulsory*.(2) Figures to the right indicate *full* marks.(3) Illustrate your answers with neat sketches wherever *necessary*.**Marks**1. (a) Fill in the blanks (any *five*) :—

5

(i) To apply precise, specific torque on nut bolt ..... is used.

- (a) Ring Spanner                      (b) Adjustable Spanner  
(c) Torque Wrench.

(ii) To remove slug from welding job ..... is used.

- (a) Chipping Hammer                      (b) Sledge Hammer  
(c) Ball pein hammer.

(iii) Reaming is the operation of .....

- (a) Tapering the hole                      (b) Enlarging the hole  
(c) Cutting the job.

(iv) To form connection between electronics component ..... is used.

- (a) Soldering                      (b) Brazing                      (c) Chipping.

(v) To measure the pitch of screw ..... is used.

- (a) Filler gauge                      (b) Screw pitch gauge                      (c) Depth gauge.

(vi) Angle in between blade and stock of try square is .....

- (a) 60°                      (b) 90°                      (c) 45°.

(b) State whether *true* or *false* (any *five*) :—

5

(i) In carburizing flame acetylene gas quantity is more than oxygen.

(ii) Stakes are used to give different shapes to sheet metal.

(iii) The purpose of filler rod is to fill the weld joint.

(iv) In G. I. Sheet iron plate is coated with lead.

(v) Trammel is used to cut metal shee in sheet metal work.

(vi) Specific gravity of battery electrolyte is measured with galvanometer.

(c) What is mean by (any *five*) :—

5

- (i) Riveting                      (ii) Hack sawing                      (iii) Punching  
(iv) Filing                      (v) Blanking                      (vi) Pitch of screw thread.

[ Turn over

(d) Match the following pairs :—

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**' A ' Group**

**' B ' Group**

(i) Welding safety equipments

(a) M. S. Sheet

(b) Hand Screen and Goggle

(ii) Stainless steel sheet metal

(c) Oxy-Acetylene Gas

(iii) Centre Lathe Machine

(d) For making can and kitchenware

(iv) Gas Welding

(e) Tail Stock

(v) Black Iron

(f) Hemming.

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

16

(a) Write note on classification of Steel.

(b) What kind of precautions are taken and safety measures are followed to avoid the accidents in workshop ?

(c) State the types of weld joints. Explain any two with figures.

(d) What are the Grinding defects ? Write its causes and remedy work.

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

16

(a) Write defects in welding work.

(b) What are the different types of drilling machines ? Explain any one with figure.

(c) Write note on pedestal grinding machine with neat sketch.

(d) State the method of producing knurling on job using lathe machine.

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

16

(a) What is the seam in sheet metal work ? Write the types of seams.

(b) Describe folding and bending in sheet metal working.

(c) Distinguish between Soldering and Brazing.

(d) What are the types of Lathe Beds ? Describe Lathe Bed.

5. Write short note (any *four*) :—

16

(a) Nibbling.

(b) Hemming.

(c) Magnetic Chuck.

(d) Wheel Dressing of Grinding Wheel.

(e) Hardening and Tempering of cutting Tool.

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

16

(a) What is the ' 5S ' Techniques ? Write its advantages.

(b) Describe in details Electric Arc welding process.

(c) Write the types of Electrodes by Fluxes.

(d) What are the types of Gas Flames used in Gas Welding ? Describe it ?