

MAHARASHTRA STATE BOARD OF SKILL DEVELOPMENT EXAMINATION, MUMBAI

Examination--July, 2020

CERTIFICATE COURSE IN TWO WHEELER MECHANIC

[**Ἐφ**—3 **ἰἑῶἔ**]

(BEÚHÉ ~~NÖÉ~~—100)

<E>E E: C±E (E+®01)

NÖÖ

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1. (+) $\text{MEE}^{3\frac{1}{2}}\text{Ea}^{\text{aEE}}\text{VÉEMÉE}\text{JÉ}^{\text{®}}\text{Ů}(\text{E}^{\text{dEhEi}^{\text{aEE}}\frac{1}{2}}\text{p})\{\text{EÉÉ}\}:-$

(1) °É°É°É°É°É®(°É°É°]úû½[°É°É°°É°É°]® É°É°®üÉÉ°É°(°É°É°É°É.

(+) <IMKÉŋÉxÉ (ǃ) <IM/ÉxÉ 07670

(b) $\alpha \mathbb{E} \{ \mathbb{E} \{ \tilde{E} \} \} \leq \alpha \mathbb{E} \{ \ln \mathbb{E} \{ \tilde{E} \} \} \times \mathbb{E} \{ 1/2 \}$.

(2) $\phi \in \text{Irr}(H)$ and $\psi \in \text{Irr}(G)$ are such that $\psi|_H = \phi$. Then ψ is a constituent of $\phi \otimes \chi$ for some $\chi \in \text{Irr}(G/H)$.

$$(+) \quad \frac{1}{2} \text{H}^+ \quad (d) \quad \frac{1}{2} \text{H}^+ \quad (E_0) = i^0 \text{EVEE} \quad (b) \quad \frac{1}{2} \text{H}^+ \quad (E_0) = i^0 \text{EVEE} \quad (b) \quad \frac{1}{2} \text{H}^+ \quad (E_0) = i^0 \text{EVEE}$$

(3) Of the value of the right of the defendant to have his name removed from the record of the conviction.....
+ the fee for the removal

(+) 20W40 (±) 30HD (E) 40HD (b) $\frac{aE(E_0 - E_{ch})E_{20}}{E(E_0 - E_{ch})E_{20} + E(E_0 - E_{ch})E_{20}}$

(4) $\phi \in \mathcal{F}^{\text{ev}} \cap \mathcal{M}(\mathcal{H}^{\text{ev}} + \mathcal{I}C)$ iff $\exists \mathcal{E} \in \mathcal{S}^{\text{ev}} \exists \mathcal{U} \in \mathcal{U}^{\text{ev}}$ $\exists \mathcal{E} \in \mathcal{S}^{\text{ev}}$
 $C + \mathcal{E} \in \mathcal{F}^{\text{ev}}$.

$$(+) \quad \mathbb{E}^0[\mathbb{M} \pm \mathbb{E} \mid \mathcal{F}_t] \in \mathcal{B}^{\text{af}} \quad (2) \quad \mathbb{E}^0[\mathbb{E} \mid \mathcal{F}_t] \in \mathcal{B}^{\text{af}}$$
[illegible]

(5) $\frac{d}{dt} \left(\frac{\partial L}{\partial v^i} \right) = \frac{\partial L}{\partial x^i}$ for all i . The Lagrangian L must satisfy the following conditions:

+ L must be bounded below.

(+) 10-20 (†) 20-30 (E) 15-20 (b) 25-30

(6) °ÉÇÉÉÉÉ®mÉÉÉÉ°ÉÉÉ {±ÉÉ B+®ÜÉÉ mm +°ÉÉÉ

(+) 0.5 (d) 0.6 (E) 0.7 (b) 0.8.

(२६) $\text{SHH}^0 E^0 \rightarrow \text{SHH}^1 E^1 \rightarrow \text{SHH}^2 E^2 \rightarrow \dots$ (EöelñÉiÉñ/2) {ÉÉÉ} :-

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(1)]θ°]AEò <A/Eé·Év^aEà {EÉâ QÊÂ + °EíEÉEí.

(2) °|ÉÉä]õ ¢ä]øÉ½þ ÉÉ{®üÉÉÉ.

(3) [Ů°]Ĥēō <ĤExĖ'Ėvā bē>xĖ bĤ}]ō |ÉEd®Sfā Ed=ffāPu fēē®ūēē.

(4) $\text{E}^{\circ}_{\text{Fe}} \text{O} \text{U} \text{E}^{\circ}_{\text{H}} \text{E}^{\circ}_{\text{F}} \text{E}^{\circ}_{\text{S}} \text{E}^{\circ}_{\text{A}} + \text{M}^{\circ}_{\text{U}} \text{O} \text{U} \text{E}^{\circ}_{\text{H}} \text{E}^{\circ}_{\text{F}} \text{E}^{\circ}_{\text{S}} \text{E}^{\circ}_{\text{A}} = \text{E}^{\circ}_{\text{H}} \text{E}^{\circ}_{\text{F}} \text{E}^{\circ}_{\text{S}} \text{E}^{\circ}_{\text{A}} \text{O} \text{U} \text{E}^{\circ}_{\text{H}} \text{E}^{\circ}_{\text{F}} \text{E}^{\circ}_{\text{S}} \text{E}^{\circ}_{\text{A}}$

[illegible]

(6) Εὐχέλῳ (ἑὐχέλῳ) ὁ ἑὐχέλῳ σέξῳ ἑὐχέλῳ® ἑὐχέλῳ.

$$(E_0) \{ \text{EÜEC} \circ \text{ÜKE} \text{ E} \pm \text{E} \frac{1}{2} \} (E_0 \text{EhEiE} \frac{1}{2}) \{ \text{EÜE} \} :-$$

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(1) $b \in B^{\circ} + \{a\}$.

(2) $B_{\pm E} < Cb_{\theta}$.

(3) $+E^a E.BS E.\{E\}$.

(4) $B_i \rightarrow BSE \cdot \{E\}$.

(5) $\varphi \in \text{BS}(\mathcal{E}) \cdot \{\varphi\}$.

(6) bθ. + ÉäBSÉ. °Éò.

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

(ENGLISH)

[TIME ALLOWED—3 HOURS]

(MARKS—100)

ENGINE AND CLUTCH (THEORY-I)**Marks**

1. (a) Fill in the blanks (any five) :—

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(i) Generally in Two wheeler battery is used for

(a) Ignition

(b) Starting engine

(c) Electrical devices

(d) None of the above.

(ii) Generally in Two wheeler engine cooling fins are used as temperature.

(a) Conduction of

(b) Convection of

(c) Radiation of

(d) None of the above.

(iii) Generally in Two wheeler engine for lubricating system oil is used

(a) 20W40 (b) 30HD (c) 40HD (d) None of the above.

(iv) Generally in Activa type Two wheeler type of clutch used.

(a) Single plate dry

(b) Multi-plate dry

(c) Multi-plate wet

(d) Centrifugal.

(v) Generally in Two wheeler clutch free play is mm.

(a) 10-20

(b) 20-30

(c) 15-20

(d) 25-30.

(vi) In general air gap in spark plug.

(a) 0.5 mm

(b) 0.6 mm

(c) 0.7 mm

(d) 0.8 mm.

(b) Write *true* or *false* (any five) :—

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(i) Two stroke engine contains ports.

(ii) Sprockets are used with belts.

(iii) Down draft carburettor is used in two stroke engine.

(iv) Odometer instrument used for the indicating distance travelled by the vehicle.

(v) Function of gear box is to transmit the power from engine to rear wheel.

(vi) Chain are used with pulleys.

(c) State long form (any five) :—

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(i) D. T. S. I.

(ii) L. E. D.

(iii) I. H. P.

(iv) F. H. P.

(v) B. H. P.

(vi) D. O. H. C.

[Turn over

- (d) Match the pair :— 5
- | ‘ A ’ Group | ‘ B ’ Group |
|------------------|-----------------------------------|
| (i) C. B. points | (a) Used in Transmission system |
| (ii) Battery | (b) Used for indicating turn |
| (iii) Valve | (c) Lead Acid |
| (iv) Fuel filter | (d) One way communicating passage |
| (v) Flasher Unit | (e) Used in fuel system. |
2. Answer the following (any *two*) :— 16
- Explain Ignition coil.
 - Difference between Battery and Magneto.
 - Explain oil pump used in lubrication of Two wheeler.
 - Explain clutch used in Two wheelers.
3. Answer the following (any *two*) :— 16
- How fuel system is protected from dust, rust ?
 - Difference between Scooter engine and Motorcycle engine.
 - How valve clearance and valve timing are adjusted ?
 - Write types of spark plug. Explain any one.
4. Write answer in brief (any *two*) :— 16
- What is Voltage regulator ?
 - Write types of Silencers. Explain any one.
 - What is tell-tale instrument ? Explain any one.
 - What is the effect of foreign particles ? How Engine is protected from it ?
5. Write a short note (any *four*) :— 16
- Clutch Plate.
 - Condenser.
 - Camshaft.
 - C. D. I. Unit.
 - Gear box sliding mechanism.
 - Valve operating mechanism.
6. Attempt the following (any *two*) :— 16
- Explain linkage mechanism used for gear changing and clutch.
 - Types bearings used in two wheelers engine and explain any one.
 - Explain Fuel system.
 - Explain Speedometer and Speedometer drive.
 - Servicing and maintenance of gear box.
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