

17618

21415

3 Hours / 100 Marks

Seat No.

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- Instructions :** (1) All Questions are *compulsory*.
(2) Answer each next main Question on a new page.
(3) Illustrate your answers with neat sketches wherever necessary.
(4) Figures to the right indicate full marks.
(5) Assume suitable data, if necessary.
(6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.
(7) Preferably write the answers in sequential order.

Marks

1. (A) Attempt any **THREE** of the following : **12**
- (a) Write function of following equipments :
- (i) Engine Analyser
 - (ii) Valve grinder
 - (iii) Wheel balancer
 - (iv) Honning Machine
- (b) State four safety precautions to be followed in auto workshop.
- (c) Explain weekly maintenance schedule for two wheeler.
- (d) Describe the inspection procedure for crankshaft.
- (B) Attempt any **ONE** of the following : **6**
- (a) Draw a layout required for servicing 20 passenger cars per day. List special & general tools & equipments required for the same.
- (b) Describe the scheduled maintenance procedure for heavy vehicle.

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- 2. Attempt any FOUR of the following :** **16**
- (a) List the documents required to be maintained in automobile workshop and show the format for job card.
 - (b) Explain the points to be considered to decide whether vehicle component to be replaced or repaired during servicing.
 - (c) List tests to check mechanical fuel injectors and explain leak off test.
 - (d) What will happen if coolant temperature sensor does not work ?
 - (e) List and explain four causes & give remedies for low oil pressure in engine.
 - (f) What is 'soot' ? Give two causes and suitable remedies for soot formation.
- 3. Attempt any FOUR of the following :** **16**
- (a) Write stepwise procedure to carry out the oil pressure testing.
 - (b) Write stepwise procedure for inspection of lubrication system.
 - (c) What is vapour lock in petrol engine ? How vapour lock can be removed ?
 - (d) If vehicle is not taking load while climbing steep road, give four causes and remedies.
 - (e) Give four causes and remedies for excessive oil consumption of engine.
- 4. (A) Attempt any THREE of the following :** **12**
- (a) Write inspection procedure for cylinder block.
 - (b) What is tuning of engine ? Write tune-up procedure for petrol engine.
 - (c) Write inspection procedure for crankshaft.
 - (d) List types of clutch adjustments and explain procedure for any one with sketch.
- (B) Attempt any ONE of the following :** **6**
- (a) What is calibration of FIP ? How calibration is carried out on FIP test bench ?
 - (b) Write procedure for wheel balancing with neat sketch.

5. Attempt any FOUR of the following :**16**

- (a) Give any four causes and remedies for clutch failure.
- (b) What is necessity of bearing preload ? Write its procedure.
- (c) Write procedure for checking tooth contact between ring gear & pinion in differential.
- (d) Write any four causes and give remedies for 'Hard Gear Shifting' in gear box.
- (e) Write stepwise procedure for checking clutch plate for thickness and run-out.
- (f) What are the types of brake bleeding ? Write procedure for pressure bleeding.

6. Attempt any FOUR of the following :**16**

- (a) Draw sketch showing wheel rotation for :
 - (i) Four wheel with spare wheel
 - (ii) Six wheel with spare wheel
 - (b) List four ways to increase tyre life.
 - (c) Describe adjustments of doors & lock.
 - (d) Describe any four denting tools and equipments.
 - (e) Describe any four painting defects with neat sketch.
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