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Time : 1½ Hours

**AUTOMOBILE**  
**(NSQF)**

Subject Code

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Total No. of Questions : 3

(Printed Pages : 6)

Maximum Marks : 30

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*INSTRUCTIONS* : (i) Answer each question on a fresh page.

(ii) Write the question number and sub-question number clearly.

(iii) All questions are compulsory.

(iv) Figures to the right indicate full marks.

1. (A) Choose and write the *correct* alternatives from the options given below : 3

(1) Grease is a ..... lubricant.

(a) solid

(b) semi solid

(c) liquid

(d) emulsion

(2) Drill bits are ..... tools used to create cylindrical holes.

(a) cutting

(b) milling

(c) rolling

(d) taping

- (3) In washing of a vehicle, plastic brush is used for cleaning .....
- (a) windows
  - (b) roof
  - (c) tyre sidewalls
  - (d) windshield
- (4) The tool which is used for chipping of metals is .....
- (a) Hand Hacksaw
  - (b) Snip
  - (c) Bench vice
  - (d) Chisel
- (5) Wheel balancing helps in minimizing ..... vibration.
- (a) tyre
  - (b) gear box
  - (c) shock absorber
  - (d) brake drum
- (6) The special tool used to remove oil filter is called .....
- (a) tappet wrench
  - (b) ring spanner
  - (c) oil filter wrench
  - (d) torque wrench

(B) Answer the following questions in *one* sentence : 3

- (1) Give *one* point of difference between live and dead axle.
- (2) What is the purpose of hydrometer in automobile ?
- (3) What connects stub axle and front axle to rotate the front wheels ?

(C) Answer the following questions in *two* sentences : 4

- (1) Define the following terms related to engine : (any *two*)
  - (a) IHP
  - (b) BHP
  - (c) FHP
  - (d) Engine torque
- (2) "A Technician is about to replace the engine oil of car"  
Write any *two* materials and tools respectively he will require to replace oil and oil filter.

2. (A) Choose and write the *correct* alternatives from the options given below : 3

- (1) Safety device for battery in automobile is .....
  - (a) alternator
  - (b) cut out unit
  - (c) ignition coil
  - (d) distributor

- (2) Tendency of a vehicle to dive in its front on application of brake is called .....
- (a) pitching
  - (b) yawing
  - (c) rolling
  - (d) dipping
- (3) Coolant is also called as .....
- (a) antidote
  - (b) antiseptic
  - (c) antifreeze
  - (d) antigen
- (4) The volume of cylinder above the piston when it is at TDC is called .....
- (a) piston displacement
  - (b) engine capacity
  - (c) clearance volume
  - (d) swept volume
- (5) Air filter is cleaned by .....
- (a) air blower
  - (b) oil
  - (c) chemical
  - (d) water

(6) A Tachometer is used for measuring .....

- (a) vehicle speed
- (b) engine speed
- (c) compression charge in the cylinder
- (d) velocity of camshaft

(B) Answer the following questions in *one* sentence : 3

- (1) Why dipstick is used ?
- (2) What is the function of ignition coil ?
- (3) State any *one* principle of suspension system in automobile.

(C) Answer the following questions in *two* sentences : 4

- (1) Classify chassis based on fitting of engine.
- (2) Explain the following innovations in automobile :
  - (a) Blind spot detection
  - (b) Night vision assist

3. (A) Answer the following questions in *one* sentence : 3

- (1) Define "Stroke" related to engine.
- (2) How clogged fuel filter will affect engine performance ?
- (3) Write *two* types of wrenches used in automobile workshop.

(B) Answer the following questions in *two* sentences : 4

- (1) You are a sales person at Maruti-Suzuki new car show room. A customer has just walked up to you in your showroom. As per the given situation, what are your duties ? (*any two*)
- (2) Give any *four* properties of a good lubricant.

(C) Answer the following questions with the help of given below diagram of Propeller shaft : 3

(a) Label (A) (B) (C). (label any *two*)

(b) Write any *two* requirements of good propeller shaft.

