This Question Paper consists of **21** questions and **7** printed pages.
इस प्रश्न-पत्र में **21** प्रश्न तथा **7** मुद्रित पृष्ठ हैं ।

Roll No.
अनुक्रमांक

Code No. **64/VOC/O**
कोड नं.

Set - A

FOUR-WHEELER CHASSIS MECHANISM
(623/723)

Day and Date of Examination _____
(परीक्षा का दिन व दिनांक)

Signature of Invigilators 1. _____
(निरीक्षकों के हस्ताक्षर)

2. _____

General Instructions :

1. Candidate must write his/her Roll Number on the first page of the Question Paper.

2. Please check the Question Paper to verify that the total pages and total number of questions contained in the question paper are the same as those printed on the top of the first page. Also check to see that the questions are in sequential order.

3. For the objective type of questions, you have to choose any one of the four alternatives given in the question, i.e., (A), (B), (C) or (D) and indicate your correct answer in the answer-book given to you.

4. Making any identification mark in the answer-book or writing Roll Number anywhere other than the specified places will lead to disqualification of the candidate.

5. Answers for all questions, including matching, true or false, fill in the blanks, etc., are to be given in the answer-book only.

6. Write your Question Paper Code No. **64/VOC/O**, Set **A** on the answer-book.

सामान्य अनुदेश :

1. परीक्षार्थी प्रश्न-पत्र के पहले पृष्ठ पर अपना अनुक्रमांक अवश्य लिखें ।

2. कृपया प्रश्न-पत्र को जाँच लें कि प्रश्न-पत्र के कुल पृष्ठों तथा प्रश्नों की उतनी ही संख्या है जितनी प्रथम पृष्ठ के सबसे ऊपर छपी है । इस बात की जाँच भी कर लें कि प्रश्न क्रमिक रूप में हैं ।

3. वस्तुनिष्ठ प्रश्नों के लिए आपको प्रश्न के (A), (B), (C) अथवा (D) चारों विकल्पों में से कोई एक सही उत्तर चुनना है तथा अपने सही उत्तर को आपको उत्तर-पुस्तिका में लिखना है ।

4. उत्तर-पुस्तिका में पहचान-चिह्न बनाने अथवा निर्दिष्ट स्थानों के अतिरिक्त कहीं भी अनुक्रमांक लिखने पर परीक्षार्थी को अयोग्य ठहराया जाएगा ।

5. मिलान करना, सही अथवा ग़लत, रिक्त स्थान भरना आदि सहित सभी प्रश्नों के उत्तर, उत्तर-पुस्तिका में ही लिखें ।

6. अपनी उत्तर-पुस्तिका पर प्रश्न-पत्र का कोड नं. **64/VOC/O**, सेट **A** लिखें ।

FOUR-WHEELER CHASSIS MECHANISM

(623/723)

Time allowed : ***3*** *Hours]* *[Maximum Marks :* ***80***

SECTION-A

Answer any ***four*** *questions. Give neat sketches / diagrams to clarify your answers.* *4×10=40*

1. (a) Explain the necessity of a gear-box in the automobile transmission system.

(b) With the help of a neat sketch explain the functioning of the synchronizer unit in the gear-box.

2. Explain the procedure of conducting the front wheel alignment of a car.

3. Give the layout drawing of the hydraulic braking system of a modern car and label the functional units.

4. Draw a neat sketch of any one type of steering gear box used in automobiles and explain its working.

5. Draw the diagram of a semi-floating rear axle arrangement of an automobile and explain its functioning.

SECTION-B

*Answer any **four** questions. Give neat sketches / diagrams to clarify your answers.* *4×5=20*

6. Name the materials of the following components :

(a) Axle bearings

(b) Cylinder block

(c) Engine piston

(d) Piston rings

(e) Engine valves

7. Give neat sketches of the following tools : *2+2+1*

(a) Torque wrench

(b) Combination plier

(c) Screwdriver

8. Explain the procedure of cutting internal threads in a metal piece.

9. Compare the merits and demerits of tubed and tubeless tyres.

10. Show on a diagram the details of any one type of independent suspension system of a car.

SECTION-C

Select the correct answers and write them in your Answer Book. *10×1=10*

11. Steel is made from the ore :

(a) Bauxite

(b) Haematite

(c) Carborundum

12. The principle on which the Diesel engines work is :

(a) Otto cycle

(b) Rankine cycle

(c) Diesel cycle

13. The tool used for checking the tightness of the fastened nut is :

(a) Torque wrench

(b) Ring spanner

(c) Lock-on wrench

14. Hammer having soft heads is known as :

(a) Ball peen hammer

(b) Mallets

(c) Cross peen hammer

15. Engine valves are removed from the engine by :

(a) Puller

(b) Hammer and Tong

(c) Valve spring compressor

16. The procedure administered to a victim using a combination of mouth-to-mouth rescue breathing and chest compression is known as :

(a) CPR

(b) Kiss of life

(c) Pumping

17. Iron filing that has fallen on the eye of an operator should be removed by :

(a) Pointed Magnet

(b) Squeezing the eye

(c) Water

18. Brake oil is a _____ liquid.

(a) Compressible

(b) Non-compressible

(c) Vaporising

19. When two batteries of 12 volts each are connected in parallel we will get _____ volts at the terminals.

(a) 12

(b) 24

(c) 144

20. When the vehicle is driven down the hills, the driver should :

(a) Engage top gear

(b) Press the clutch pedal

(c) Engage lower gear

SECTION-D

Match the items on the left-hand side with the items on the right-hand side and write them in your answer book. *10×1=10*

21.

(a)	Carbon monoxide	(1)	Measures specific gravity of electrolyte
(b)	Hydrometer	(2)	Used in motor cycles
(c)	Peg board	(3)	To check the ovalness of the cylinder bore
(d)	Drag	(4)	Removes excessive metal by scrubbing
(e)	Cylinder bore dial gauge	(5)	Storing of tools
(f)	Acetylene	(6)	A colourless and odourless gas
(g)	Coil spring	(7)	Wheel balancing
(h)	Lead weights	(8)	Absorbs shocks by compressing and extending
(i)	File	(9)	Air resistance acting on moving vehicle
(j)	Wire wheels	(10)	Used in gas welding