

CBSE | DEPARTMENT OF SKILL EDUCATION

AUTOMOTIVE (SUBJECT CODE -804)

Blue-print for Sample Question Paper for Class XII (Session 2024-2025)

Max. Time: 3 Hours

Max. Marks: 60

PART A - EMPLOYABILITY SKILLS: (10 MARKS)

UNIT NO.	NAME OF THE UNIT	OBJECTIVE TYPE QUESTIONS	SHORT ANSWER TYPE QUESTIONS	TOTAL QUESTIONS
		1 MARK EACH	2 MARKS EACH	
1	Communication Skills- IV	2	-	2
2	Self-Management Skills- IV	2	1	3
3	Information and Communication Technology Skills- IV	2	1	3
4	Entrepreneurial Skills- IV	-	2	2
5	Green Skills- IV	-	1	1
TOTAL QUESTIONS		6	5	11
NO. OF QUESTIONS TO BE ANSWERED		ANY 4	ANY 3	ANY 7
TOTAL MARKS		1 x 4 = 4	2 x 3 = 6	10 MARKS

PART B - SUBJECT-SPECIFIC SKILLS: (50 MARKS)

UNIT NO.	NAME OF THE UNIT	OBJECTIVE TYPE QUESTIONS	SHORT ANS. TYPE QUES.- I	SHORT ANS. TYPE QUES.- II	DESCRIPTIVE/ LONG ANS. TYPE QUESTIONS	TOTAL QUESTIONS
		1 MARK EACH	2 MARKS EACH	3 MARKS EACH	4 MARKS EACH	
1	Measuring and Service Equipment	6	1	-	1	8
2	Steering System	6	1	-	1	8
3	Suspension System	7	1	-	1	9
4	Transmission and Final Drive system	4	1	1	1	7
5	Automotive Electrical and electronic system	4	-	1	1	6
6	Motor Vehicle Act and Rules	5	1	1	-	7
TOTAL QUESTIONS		32	5	3	5	45
No. of. Questions to be answered		26	Any 3	Any 2	Any 3	34
Total marks		1x26=26	2x3=6	3x2=6	4x3=12	50

CBSE | DEPARTMENT OF SKILL EDUCATION

AUTOMOTIVE (SUBJECT CODE -804)

Sample Question Paper for Class XII (Session 2024-2025)

Max. Time: 3 Hours

Max. Marks: 60

General Instructions:

1. Please read the instructions carefully.
2. This Question Paper consists of **24 questions** in two sections – Section A & Section B.
3. Section A has Objective type questions whereas Section B contains Subjective type questions.
4. **Out of the given (6 + 18 =) 24 questions, a candidate has to answer (6 + 11 =) 17 questions in the allotted (maximum) time of 3 hours.**
5. All questions of a particular section must be attempted in the correct order.
6. **SECTION A - OBJECTIVE TYPE QUESTIONS (30 MARKS):**
 - i. This section has 06 questions.
 - ii. There is no negative marking.
 - iii. Do as per the instructions given.
 - iv. Marks allotted are mentioned against each question/part.
7. **SECTION B – SUBJECTIVE TYPE QUESTIONS (30 MARKS):**
 - i. This section contains 18 questions.
 - ii. A candidate has to do 11 questions.
 - iii. Do as per the instructions given.
 - iv. Marks allotted are mentioned against each question/part.

SECTION A: OBJECTIVE TYPE QUESTIONS

Q. 1	Answer any 4 out of the given 6 questions on Employability Skills. (1 x 4 = 4 marks)	
i.	What are the characteristics of an ideal message? (a) Clear (b) Concise (c) Accurate (d) All of the above	1
ii.	Identify the subjects in the sentences. "The children played football". (a) The children (b) Children played (c) Played (d) Football	1
iii.	Mona is helping her sister to overcome a personality Disorder. What should she do? (a) Talk to her sister (b) Engage her in hobbies (c) Help her build confidence (d) All of the above	1
iv.	What is the shortcut key to underline text in spreadsheet?	1
v.	A _____ is an arrangement of cells in a horizontal manner. (a) Column (b) Row (c) Cell (d) Worksheet	1
vi.	Anita's children fall sick very often. They have cold and cough every month. What should Anita do? (a) Grow organic food in kitchen garden (b) Use air purifiers with HEPA filters (c) Keep them inside the house all the time (d) Paint her house with non-VOC paint	1
Q. 2	Answer any 5 out of the given 7 questions (1x5 =5)	
i.	Spark plug cleaner and tester is used for _____. (a) Sandblast cleaning. (b) Gap testing. (c) Both a and b. (d) None of the above.	1
ii.	Car washer is a most commonly used equipment in a -----.	1
iii.	Tyre inflators are used for checking ----- in tyres.	1
iv.	The nozzle at the delivery pipe is able to adjust the _____ of water, in a car washer.	1
v.	Tyre inflation gauges can be of _____. (a) Analog type. (b) Digital type. (c) Either a or b. (d) Neither a nor b.	1

vi.	Proper wheel balancing can _____. (a) Eliminate vibration and wobbling. (b) Improve tyre wear. (c) Increase fuel mileage . (d) All of above.	1
vii.	For a commercial new vehicle the initial fitness certificate is valid for (a) 15 years (b) 10 years (c) 5 years (d) 2 years	1
Q. 3	Answer any 6 out of the given 7 questions (1 x 6=6)	
i.	The amount of camber is generally kept between _____. (a) 0 – 2° (b) 0 – 4° (c) 0 – 6° (d) 0 – 8°	1
ii.	A positive camber causes the wheels to _____.	1
iii.	The amount of caster angle is about _____. (a) 1° (b) 2° (c) 3° (d) 5°	1
iv.	The amount of Toe-angle (Toe-in or Toe-out) varies from _____ to _____ mm, depending upon the type of vehicle.	1
v.	The steering gear ratio for trucks is _____.	1
vi.	Which type of steering gearbox is widely used in car? (a) Worm and sector (b) Worm and roller (c) Rack and Pinion (d) Re-circulating ball type	1
vii.	A temporary license is valid for _____ months.	1
Q. 4	Answer any 5 out of the given 6 questions (1×5=5)	
i.	Springs are made of (a) Mild steel (b) Carbon steel (c) High-speed steel (d) Spring steel	1
ii.	The reason why a laminated spring is made up of a series of leaves is to (a) Reduce interleaf friction (b) Soften the spring action and increase the maximum deflection (c) Allow the leaves to slide during the bump movement (d) Overcome the weakness at the centre spring.	1
iii.	During the rebound stroke, the load is transmitted from the main leaf from the shorter leaves by a (a) U – Bolt (b) Spring clip (c) Centre bolt (d)Shackle pin	1

iv.	The provision made to allow a leaf spring to vary its length is a (a) Swinging shackle (b) Rubber U–bolt mounting (c) Sliding Centre bolt (d) Splines in the spring eye	1
v.	The curvature of each leaf is called -----.	1
vi.	The weight which is supported by the suspension springs-----	1
Q. 5	Answer any 5 out of the given 6 questions (1×5=5)	
i.	The maximum inclination of propeller shaft fitted with Hooke's Joint (cross or spider type Joint) is_____ (a) 10° (b) 15° (c) 20° (d) 25	1
ii.	Spiral bevel gears have _____ contact of teeth.	1
iii.	One of the disadvantages of _____ drive is difficulty in lubricating gears.	1
iv.	If four-wheel drive and rear wheel drive vehicles _____.	1
v.	The overall curvature of the leaf spring is called -----.	1
vi.	Which one of the following is the type of safety sign? (a) Mandatory signs (b) Cautionary signs (c) Information signs (d) All of the above	1
Q. 6	Answer any 5 out of the given 6 questions (1×5=5)	
i.	The voltage induced in the coil of D.C. generator will follow _____ wave.	1
ii.	Modern automobile generators are the two-pole, two-brush, _____ wound type.	1
iii.	The principle on which the regulator works is called _____ principle	1
iv.	The rectifier converts the three-phase alternating current generated in the stator winding into-----.	1
v.	Emission include:- (a) NOx (b) SOx (c) Hydrocarbons (d) All of the above	1
vi.	What is the full form of PCV?	1

SECTION B: SUBJECTIVE TYPE QUESTIONS

Answer any 3 out of the given 5 questions on Employability Skills (2 x 3 = 6 marks)

Answer each question in 20 – 30 words.

Q.7	Explain the meaning of motivation.	2
Q.8	What is entrepreneurship?	2
Q.9	What do you think by attitude of entrepreneurship?	2
Q.10	Explain the importance of green jobs in reducing the emission of greenhouse gases.	2
Q.11	Give different steps to start Libre Office Impress?	2

Answer any 3 out of the given 5 questions in 20 – 30 words each (2 x 3 = 6 marks)

Q.12	Name the common type of positive displacement compressor.	2
Q.13	Define emission. Enlist (any two) sources of emission.	2
Q.14	Give the main advantage and major components of a hydraulic power steering system.	2
Q.15	Define sprung and un-sprung weight with a sketch.	2
Q.16	Write (any two) main functions of the propeller shaft.	2

Answer any 2 out of the given 3 questions in 30– 50 words each (3 x 2 = 6 marks)

Q.17	Explain with a diagram the principle of differential.	3
Q.18	Write the advantages of an alternator over a dynamo.	3
Q.19	With a neat sketch explain the working of catalytic converter used in automobile.	3

Answer any 3 out of the given 5 questions in 50– 80 words each (4 x 3 = 12 marks)

Q.20	Explain the principle of D.C. generator (dynamo) and its working.	4
Q.21	Explain the operation of differential with a diagram when the vehicle moving on a straight-ahead path.	4
Q.22	Explain with a sketch the construction of a telescopic shock absorber.	4
Q.23	With a neat sketch explain the construction and working of an air compressor.	4
Q.24	Explain the function of different components of Hydraulic Power Steering.	4