



# **BOARD OF SCHOOL EDUCATION HARYANA**

## **Syllabus and Chapter wise division of Marks (2024-25)**

**Class- 9<sup>th</sup>**

**Subject: Automotive**

**Code: AUT 926**

### **General Instructions:**

1. There will be an Annual Examination based on the entire syllabus.
2. The Annual Examination will be of 60/2=30 marks, Practical Examination will be of 50 marks and 20 marks weightage shall be for Internal Assessment.
3. . For External Assessment (Practical) Examination:
  - (i) External Assessment- Hand on Skill of 25 (Written 10, Practical 15).
  - (ii) External Assessment- Portfolio of 10.
  - (iii) External Assessment- Viva of 15.

### 4. For Internal Assessment:

There will be Periodic Assessment that would include:

- i) For 6 marks- Three SAT exams will be conducted and will have a weightage of 06 marks towards the final Internal Assessment.
- ii) For 2 marks- One half yearly exam will be conducted and will have a weightage of 02 marks towards the final Internal Assessment.
- iii) For 2 marks- Subject teacher will assess and give maximum 02 marks for CRP (Class room participation).
- iv) For 5 marks- A project work to be done by students and will have a weightage of 05 marks towards the final Internal Assessment.
- v) For 5 marks- Attendance of student will be awarded 05 marks as:

75% to 80%	- 01 Marks
Above 80% to 85%	- 02 Marks
Above 85% to 90%	- 03 Marks
Above 90% to 95%	- 04 Marks
Above 95% to -	- 05 Marks



# Course Structure (2024-25)

Class- 9<sup>th</sup>

Subject: Automotive

Code: AUT 926

Unit. No.	Unit Name	Unit Marks
1	History and Evolution of Automobile	05
2	Various Type of Automobile	08
3	System and Component of Automobile	12
4	Road Safety	09
5	Automobile and our Environment	04
6	Vehicle Maintenance and Service	08
7	Innovation and Development in Automobile	04
Unit. No.	Employability Skill Units	Unit Marks
1.	Communication Skills	2
2.	Self-Management Skills	2
3.	Information and Communication Technology Skills	2
4.	Entrepreneurship Skills	2
5.	Green Skills	2
Total		60/2=30
Practical Examination		50
Internal Assessment		20
<b>Grand Total</b>		<b>100</b>



## **Unit 1: History and Evolution of Automobile**

Innovation of Wheel, Wheel and its Structure Wheel cart, type of cart  
Innovation of Automobile Innovation of Automobile (post World War ii),  
Indian Automobile Scenario.

## **Unit 2: Various Type of Automobile**

Two wheeler and three wheeler Passenger and commercial vehicle  
Agriculture Vehicle, Combine Harvester Construction Equipment Vehicle Like  
– Bulldozer, Road Roller, Dumper, Excavator Etc. Special Vehicle

## **Unit 3: System and Component of Automobile**

Chassis and Auto Body ,Automobile Body or Super structure Engine and  
its components SI and CI Engine, Component of IC Engine Lubrication System,  
Objective of Lubrication Cooling System ,Necessity of cooling Fuel supply  
system ,fuel supply component Transmission System ,Requirement of Clutch,  
main parts of clutch, function of gear box. Front and rear axle ,Propeller shaft  
.Steering and suspension system ,function of steering system, Requirement of  
good steering system, various component of suspension system Wheel tyre and  
Brake, Function of wheel ,function of tyre ,requirement of good breaking  
system, type of brake. Electrical or electronic and AC, Component of AC Active  
and Passive Safety

## **Unit 4: Road Safety**

Importance of Road safety, Safety devices Safe and responsible driving,  
Know your blind spot, fasten your seat belt. Road sign Driving rule and  
registration, Registration rule and process , Driving Licence, Air Pollution,  
Auto Emission and EU/BS Standards ,Emission norms in India PUC  
Certification

## **Unit 5: Automobile and our Environment**

Importance of vehicle Maintenance and servicing ,Daily inspection,  
maintenance check-up

## **Unit 6: Vehicle Maintenance and Service**

Tips to extend life of vehicle Introduction to vehicle service procedure ,  
Filling job card

## **Unit 7: Innovation and Development in Automobile**

Innovation and development ,Electric car, hybrid vehicle, fuel cell,  
New Development, G-CON



## **Employability Skill –**

- Communication skill,
- Self-management skill,
- Information and Communication Technology skill (ICT),
- Entrepreneurship Skill,
- Green skills

## **Practical's: -**

- 1. Wheel cart**
- 2. Two Wheelers**
- 3. Three wheelers**
- 4. Construction Vehicles**
- 5. Chassis**
- 6. Body**
- 7. Engine and its components**
- 8. Cooling system**
- 9. Fuel Supply System**
- 10. Transmission system**
- 11. Front and Rear Axle**
- 12. Steering and suspension system**
- 13. Wheel and tyre**
- 14. Brake.**
- 15. Safety Device**
- 16. Road sign.**
- 17. Driving Registration.**
- 18. Air Pollution.**
- 19. Job card.**
- 20. New Innovation.**



# Month wise Syllabus Teaching Plan (2024-25)

Class- 9<sup>th</sup>

Subject: Automotive

Code: AUT 926

Month	Subject- content	Teaching Periods	Revision Periods	Practical Work
April	<b>Automobile –</b> Introduction of Automobile About Automobile Industry Scope of Automobile <b>Employability Skill</b>	6	2	3
May	<b>Automobile – Unit -1</b> Session-1- Innovation of Wheel ,Wheel and its Structure Session-2- Wheel cart ,type of cart Session-3-Innovation of Automobile Session-4- Innovation of Automobile (post World War ii), Indian Automobile Scenario. <b>Employability Skill – Unit-01</b> Session 01- Introduction to communication Session 02-Verbal Communication Session 03- Non-Verbal Communication Session 04-Writing Skills Parts of speech	16	2	3
June	Home Work – Make all Practical of Unit .1 All Session Revision ES Session 1 to 4			
July	<b>Automobile – Unit-2</b> Session-1- Two wheeler and three wheeler Session-2- Passenger and commercial vehicle Session -3- Agriculture Vehicle ,Combine Harvester Session -4- Construction Equipment Vehicle Like – Bulldozer ,Road Roller, Dumper, Excavator Etc. S-5 – Special Vehicle <b>Employability Skill – Unit-01</b> Session 05- Writing Skills Sentences Session 06-Pronunciation Basics Session 07-Greeting and Introduction Session 08-Talking about Self Session 09-Asking Questions-I Session 10- Asking Question-II	12	06	07



<p>August</p>	<p><b>Automobile – Unit-3</b>            Session :1- Chassis and Auto Body ,Automobile Body or Superstructure            Session :2- Engine and its components SI and CI Engine, Component of IC Engine            Session :3- Lubrication System ,Objective of Lubrication            Session :4- Cooling System, Necessity of cooling  <b>Employability Skill – Unit 02</b>            Session 01-Introduction to Self-Management            Session 02- Strength and Weakness Analysis            Session 03- Self-Confidence            Session 04-Positive Thinking            Session 05-Personal Hygiene            Session 06- Grooming</p>	<p>16</p>	<p>04</p>	<p>04</p>
<p>September</p>	<p><b>Revision for Half-Yearly Exam</b>  <b>Automobile – Unit -3</b>            Session : 5- Fuel supply system ,fuel supply component            Session :6 – Transmission System , Requirement of Clutch, main parts of clutch, function of gear box.            Session :7- Front and rear axle ,Propeller shaft .  <b>Employability Skill Unit-03</b>            Session 01- Introduction to ICT            Session 02-ICT Tools- Smartphones and Tablets-I            Session -03- Smartphones and Tablets-II            Session 04-Parts of Computer Peripherals            Half-Yearly Exam</p>	<p>14</p>	<p>06</p>	<p>03</p>



October	<p><b>Automobile – Unit-3</b>            Session :8-Steering and suspension system, function of steering system, Requirement of good steering system, various component of suspension system            Session :9 -Wheel tyre and Brake, Function of wheel ,function of tyre , requirement of good breaking system, type of brake.            Session : 10-Electrical or electronic and AC, Component of AC            Session : 11-Active and Passive Safety</p> <p><b>Employability Skill Unit-03</b>            Session 05-Basic Computer operations            Session 06-Performing Basic File Operations            Session 07-Communication and Networking-Basic of Internet            Session 08-Communication and Networking-Internet Browsing</p>	12	02	06
November	<p><b>Automobile –Unit-4</b>            Session : 1- Importance of Road safety, Safety devices            Session :2-Safe and responsible driving , Know your blind spot, fasten your seat belt.            Session : 3-Road sign            Session :4-Driving rule and registration, Registration rule and process Driving License</p> <p><b>Employability Skill – Unit-03</b>            Session 09-Communication and Networking Introduction to E-mail            Session 10- Creating E-mail account            Session 11-Writing of an E-mail            Session 12-Receiving and Replying to emails</p>	10	05	07



December	<p><b>Automobile –Unit-5</b>            Session :-1-Air Pollution            Session : 2-Auto Emission and EU/BS Standards ,Emission norms in India            Session :3-PUC Certification</p> <p><b>Unit-6</b>            Session :1-Importance of vehicle Maintenance and servicing ,Daily inspection, maintenance check-up            Session : 2-Tips to extend life of vehicle</p> <p><b>Employability Skill – Unit 04</b>            Session 01- What is Entrepreneurship            Session 02- Role of Entrepreneurship            Session 03-Qualities of a successful Entrepreneur</p>	15	03	06
January	<p><b>Automobile –Unit-6</b>            Session : 3-Introduction to vehicle service procedure ,Filling job card</p> <p><b>Unit-7</b>            Session :-1-Innovation and development , Electric car, hybrid vehicle, fuel cell, New Development, G-CON</p> <p><b>Employability Skill – Unit-04</b>            Session 04-Distinguishing Characteristics of Entrepreneurship and Wage Employment            Session 05-Types of Business Activities            Session 06-Product,Service and Hybrid Businesses            Session 07-Entrepreneurship Development Process</p> <p><b>Employability Skill –Unit-05</b>            Session 01-Society and Environment            Session 02-Conserving and Natural Resources            Session 03- Sustainable Development and Green Economy</p>	10		02
February	Revision		10	
March	Annual Examination			





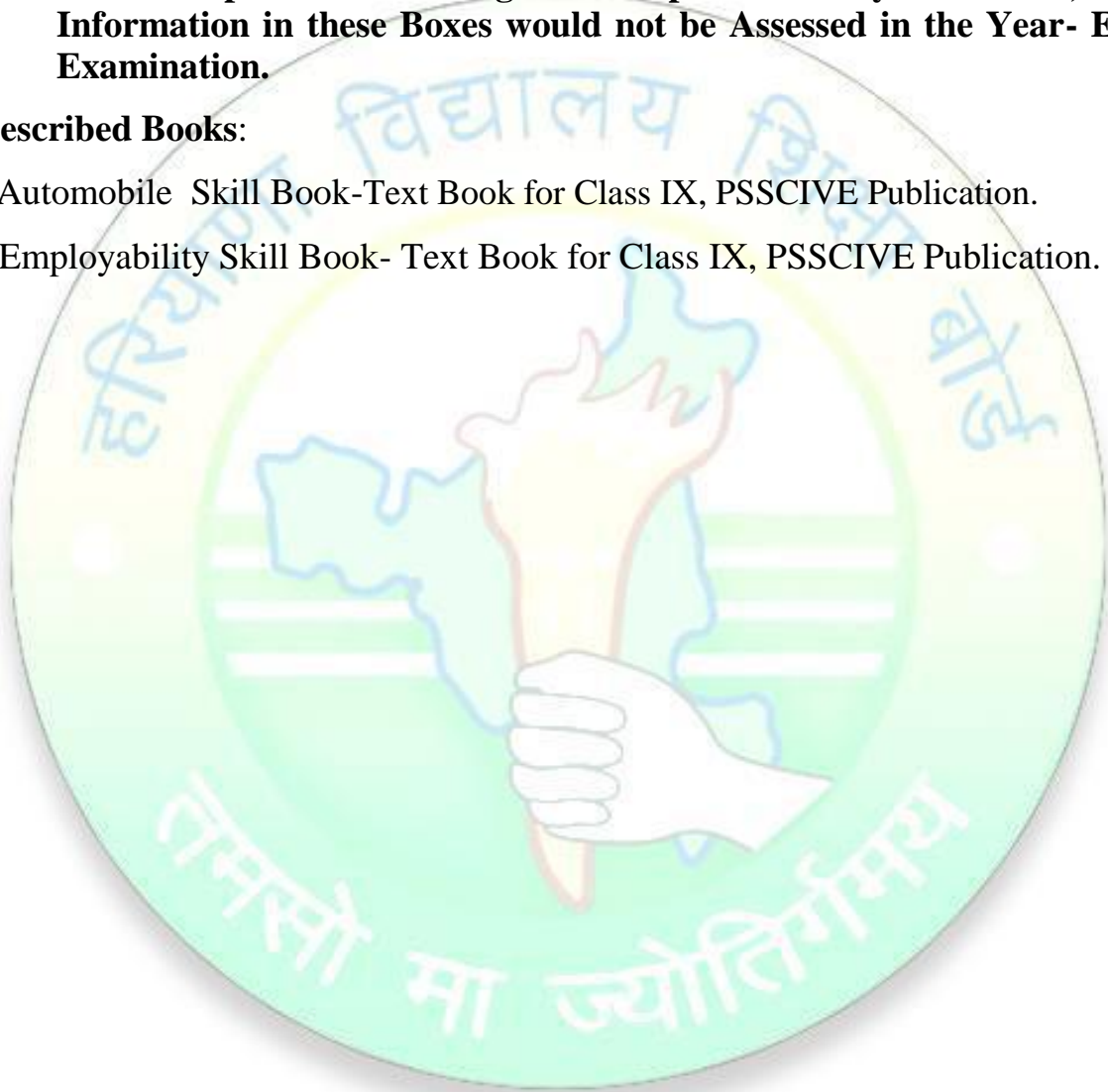
**Note:**

**Skill Subject Teachers are advised to direct the students to prepare Practical Notebook of the Terminology/Definitional Words/ Glossary used in the Chapters for Enhancement of Vocabulary or Clarity of the Concept.**

- **The PSSCIVE Skill Textbook Present Information in Boxes the book. These help Students to get Conceptual Clarity. However, the Information in these Boxes would not be Assessed in the Year- End Examination.**

**Prescribed Books:**

1. Automobile Skill Book-Text Book for Class IX, PSSCIVE Publication.
2. Employability Skill Book- Text Book for Class IX, PSSCIVE Publication.





# NSQF Question Paper Design (2024-25)

Class- 9<sup>th</sup>

Subject: Automotive

Code: AUT 926

Time :- 2 Hours 30 Minutes

Competencies	Total
Knowledge	40%
Understanding	30%
Application	20%
Skill	10%
	100%

Type of Question	Marks	Number	Description	Total Marks
Objective Questions	1	15	6 Multiple Choice Questions, 3 Fill in the Blanks Questions, 3 One Word Answer Type Questions, 3 Assertion-Reason Questions true/false	15
Very Short Answer Type Question	2	6	Internal choice will be given in any 2 questions	12
Short Answer Type Question	3	6	Internal choice will be given in any 2 questions	18
Essay Answer Type Question	5	3	Internal options will be given in all the questions	15
Total		30		60