

CBSE | DEPARTMENT OF SKILL EDUCATION

AUTOMOTIVE (SUBJECT CODE -804)

Blue-print for Sample Question Paper for Class XI (Session 2022-2023)

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- III	1	1	2
2	Self-Management Skills- III	2	1	3
3	ICT Skills- III	1	1	2
4	Entrepreneurial Skills- III	1	1	2
5	Green Skills- III	1	1	2
TOTAL QUESTIONS		6	5	11
NO. OF QUESTIONS TO BE ANSWERED		Any 4	Any 3	07
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	Regular Maintenance of an Engine	5	1	1	2	9
2	Regular Maintenance of Transmission System	7	1	-	-	8
3	Regular Maintenance of Gear	5	1	1	-	7
4	Service of Wheels	5	1	-	1	7
5	Regular Maintenance of Tubes and Tires	4	-	-	1	5
6	Regular Maintenance of Brakes	6	1	1	1	9
TOTAL QUESTIONS		32	5	3	5	45
NO. OF QUESTIONS TO BE ANSWERED		26	Any 3	Any 2	Any 3	34
TOTAL MARKS		1 x 26 = 26	2 x 3 = 6	3 x 2 = 6	4 x 3 = 12	50 MARKS

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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.	Select the words we should use when we communicate verbally. a) Use straight words b) Use simple words c) Use precise words d) Use fixed words	1
ii.	_____ occurs when one or more group members rely on the efforts of other group members and fail to contribute their time and effort. a) Team cohesion b) Loss of individuality c) Social loafing d) Work team structure	1
iii.	Ravi works hard to get the best student award at the end of the year. Identify the type of motivation is this. a) Internal b) External c) Both internal and external d) Not any specific type of motivation	1
iv.	Select the shortcut key, used to create a new document. a) Ctrl+ c b) Ctrl + n c) Ctrl + m d) (d) Ctrl + d	1
v.	One's tendency to respond in a certain way towards a certain idea, object, person, or situation is _____. a) perseverance b) attitude c) independent d) open mindedness	1
vi.	Write main role of the Government in a green economy.	1

Q. 2	Answer any 5 out of the given 7 questions (1 x 5 = 5 marks)	
i.	Which of the following quantities will reduce due to the leakage of combustible gases? a) Mileage and pickup b) Tractive force c) Resistance d) Temperature	1
ii.	By changing the gear ratio, we exploit a gear box in a transmission to overcome _____. a) Temperature b) Resistances c) Friction d) Traction	1
iii.	Identify the component that allows a vehicle's wheels to rotate at different rates when making turns. a) Final drive b) Gear box c) Differential unit d) Rear axle	1

iv.	While changing gears, determine how the clutch must be positioned. a) It must be Engaged completely b) It must be Disengaged completely c) It must be Partially engaged d) It must be Partially disengaged	1
v.	Which of the following, in addition to side thrust, should be supported by the tyres? a) Sprung weight b) Unbalanced forces c) Bending effect d) Driving thrust	1
vi.	During braking, the kinetic energy of any vehicle is converted into heat energy by_____. a) Means of friction b) Means of motion c) Means of turning of vehicle d) Means of acceleration	1
vii.	The _____ gauge can be inserted through the inspection hole between brake drum and brake shoe to measure the clearance between them.	1

Q. 3	Answer any 6 out of the given 7 questions (1 x 6 = 6 marks)	
i.	Leakage of lubrication oil can be stop by changing a) Fuel filter b) Nozzles c) Cylinder block d) Gasket oil seal	1
ii.	Write any one Function of differential unit	1
iii.	In motorcycle lubricating oil is changed at a) 1000km-2000Km b) 10000Km to 15000Km c) 500km- 700Km d) 2000KM-3500KM	1
iv.	Type of wheels consist of two parts, steel rim which is generally well based to receive the tyre and pressure steel disc a) Alloy wheels b) Forged wheels c) Light alloy wheel d) Disc wheels	1
v.	Any hole in the tubeless tyre can be repaired simply by a) Heating b) Pasting c) Rubbing d) Rubber plugging	1
vi.	The material used for brake lining should be..... coefficient of friction a) Low b) Medium c) High d) Moderate	1
vii.	The braking power must be proportional to a) Weight and speed of vehicle b) Coefficient of friction c) Total area of contact surfaces d) Rolling resistance of tyre	1

Q. 4	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)	
i.	Which of the following situations shouldn't need utilizing water pressure? a) Stand by b) Running c) Hot d) cool	1
ii.	Propeller shaft is used to transmit power between Gear box and final drive a) Clutch assembly and gear box b) Engine and front axle c) Final drive and differential d) Gear box and final drive	1
iii.	To overcome resistances, it is necessary to increase the ____. a) speed b) Velocity ratio c) Tractive effort d) lubrication	1
iv.	When clutch shaft transmits the drive to countershaft and then power is transmitted to a) The main shaft of gear b) Counter shaft c) Propeller shaft d) Drive shaft	1
v.	The tubeless and tube tyres are called.....	1
vi.	In motor cycle the mechanical brake linkage is directly mounted with the brake operating lever and a) Joined by a lever b) Joined by a spring c) Locked by a pin d) Locked by a nut	1

Q. 5	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)	
i.	Identify the process that is final and finest adjustment at the recommended interval to keep the engine's performance as good as original. a) Knocking b) Tuning c) Carbonizing d) Balancing	1
ii.	When the clutch is engaged ensure that it transmit power completely without any _____. a) Delay b) interval c) friction d) slippage	1
iii.	One of the main functions of lubricating oil is to reduce friction and also to provide a _____. a) Slip b) Locking mechanism c) Cushioning effect d) Compression effect	1
iv.	Which of the following vehicles use Light alloy cast or forged wheel? a) Busses b) Three-wheeler c) Cars d) Trucks	1

v.	It is suggested that a vehicle's four wheels be rotated crosswise after every other ____. a) 15000 kms b) 10000 kms c) 12000 kms d) 5000 kms	1
vi.	In over hauling of master cylinder remove the locking ring provided for locking the master cylinder piston with the help of _____.	1

Q. 6	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)	
i.	How much heat can be removed by cooling system of car?	1
ii.	Clutch unit is fitted between _____. a) engine assembly and gear box b) Engine and front axle c) Final drive and differential d) Gear box and final drive	1
iii.	Choose the defect that may cause hard shifting and gear slips out of mesh. a) Thrust b) Improper alignment c) Slackness d) Misalignment	1
iv.	Select the component connected to front axle beam and hold the wheel hub. a) Wheel studs b) Wheel bearing c) Brake drum d) Stub axle	1
v.	Which of the following tyre is completely solid and is mounted on the wheel rim? a) Tubeless tyre b) Tube tyre c) Solid tube tyre d) Pneumatic tyres	1
vi.	Identify the procedure of removing air from hydraulic brake. a) Brake cleaning b) Brake overhauling c) Brake fanning d) Brake bleeding	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 effective communication.	2
Q. 8	Write the benefits of team work.	2
Q. 9	Give advantages of using a header or footer in a word processor document.	2
Q. 10	What does the word "business idea" mean?	2
Q. 11	Explain the importance of the Swachh Bharat Abhiyan in 4–5 lines.	2

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

Q. 12	Mention the procedure for checking the lubricating oil leakage.	2
Q. 13	Write down the functions of differential unit.	2
Q. 14	Make a list of different steps involved in changing the lubricating oil.	2

Q. 15	Give a description of the wheel play adjustment process.	2
Q. 16	List the several functions of a good braking system.	2

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

Q. 17	What procedures should be followed to check the cooling system's water circulation?	3
Q. 18	Summarize the methodology for determining the lubricating oil's quality.	3
Q. 19	Explain the steps used to remove trapped air from the fluid line.	3

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

Q. 20	Make a note of the different steps that must be taken while checking the ignition and valve timing.	4
Q. 21	Explain the role of an automobile's transmission system. Write down the various gearbox and propeller shaft functions.	4
Q. 22	What procedures must be followed for servicing mechanical brakes?	4
Q. 23	What is hub greasing? Give a thorough explanation of the removal of a wheel from an axle.	4
Q. 24	Make a list of the various equipment and materials required to repair a puncture in a tubeless tyre. How are tubeless punctures repaired?	4