



Gujarat Public Service Commission

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Syllabus for Competitive Examination for the posts of

Assistant Inspector of Motor Vehicle, class-III.

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**Scheme of Competitive Examination for the posts
of Assistant Inspector of Motor Vehicle, class-III.**

Paper	Nature Of Exam	Part	Subject	Marks	Duration
Paper I	Objective	Part A	Concerned Subjects	125	3 Hours
		Part B	Acts/ Rules/ Guideline/ Institute/ Judgements	75	
		Part C	Gujarati	50	
Total				250	3 Hours

Note: The medium of written examination shall be English and Gujarati for Part (A) and Part (B) and Gujarati for Part (C) of the Paper.

Syllabus of Written
Examination for Competitive
Examination for the posts of
Assistant Inspector of Motor
Vehicle, class-III.

Part A: Concerned Subjects

Total Questions: 125

Total Marks: 125

Medium: English&Gujarati

1. ENGINEERING DRAWING:

Engineering Curves, orthographic and isometric projections, fasteners – Projection of points, Lines & Planes, Limits Fits and Tolerances.

2. ENGINEERING MECHANICS:

Centroid & Centre of gravity, Coplanar concurrent forces, Coplanar parallel and non-concurrent forces Friction, Rectilinear motion, Curvilinear motion- centripetal force, Work-Power-Energy, Simple machines.

3. THEORY OF MACHINES AND MACHINE DESIGN:

General consideration in Machine Design, Fundamental units, Derived units, Stress & Strain, Bearing Stress, Torsional & Bending stress, power transmission, flywheel and Governor, Frictional clutches and Brakes, Gears and Bearings, Balancing and Vibration.

4. NON CONVENTIONAL ENERGY SOURCES:

Renewable sources of Energy such as Hydro, Solar, Wind, Bio mass, Tidal and Geo Thermal Energy.

5. THERMODYNAMICS AND THERMAL ENGINEERING:

Basic concepts of Thermodynamics –first and second law of thermodynamics – thermodynamic cycles, fluid statics, kinematics and dynamics. Flow measurements, orifice and pipes, impact of jet, working of pumps, modes of heat transfer, fundamentals of refrigeration and air conditioning.

6. INTERNAL COMBUSTION ENGINES:

I C engines – part and their functions, I C engines – types and classification, types of fuels used in I C engines and their properties, Working of Petrol and Diesel engines, fuel injection systems – for Petrol, Diesel, LPG and CNG, MPFI, Cooling & lubricating system of IC engine, Combustion Process, performance test on IC engine, Eco friendly fuels-conventional, LPG, CNG, Bio fuel and other topics related to Internal Combustion Engines.

7. MATERIALS AND MANUFACTURING ENGINEERING:

Engineering Materials, Heat treatment processes, Metal working, metal casting and metal joining processes, basic machine tools.

Conventional manufacturing processes like Turning, Welding, Shaping, Molding, Foundry Technology, Drilling etc.

8. AUTOMOBILE ENGINEERING:

Anatomy of vehicles, Automobile Systems - Necessity of clutch, Types of clutch, Constructional and functional details of clutch, Necessity of Transmission, Types of Transmission system, and other topics related to Automobile Transmission & Mechanism. Brake and suspension systems, control systems, conventional steering and power steering, Electrical systems- for starting, ignition and lighting, Vehicle Body Engineering, repairs and maintenance of automobiles. Automobile Component Design, Vehicle Kinematics & Dynamics, Modern Vehicle Technology, Automobile Manufacturing technology.

9. COMPUTER AIDED DESIGN AND COMPUTER AIDED MANUFACTURING (CAD/CAM):

CAD work station, Graphic packages-types and features, Geometric modeling, Various CAD software's, Introduction to CNC machines- constructional features and working. Automatic tool changer (ATC) and Automatic pallet changer (APC). CNC Part Programming.

10. POLLUTION AND VEHICLE INSURANCE:

Exhaust gasses emission control systems. CNG conversion, Vehicle noise and its control. National and International standard norms for exhaust gas pollution control. PUC Certification. Licensing, Regulations of motor vehicles, Motor vehicle insurance

11. DIAGNOSIS AND TESTING OF VEHICLE:

Testing of various elements of the vehicle Systems-Battery, clutch, brakes, wheels and tyres (wheel alignment, wheel balancing), etc. Performance test.

Part-B: Acts/Rules/Guideline/Institute/Judgements

Total Questions: 75

Total Marks: 75

Medium: English& Gujarati

1. **The Motor Vehicle Act 1988, as amended from time to time.**
2. **The Central Motor Vehicles Rules, 1989 (CMVR), as amended from time to time.**
 - Chapter I : Preliminary
 - Chapter II : Licensing of Driving of Motor Vehicles
 - Chapter III : Registration of Motor Vehicles
 - Chapter IV : Control of Transport Vehicles
 - Chapter V : Construction Equipment & Maintenance of Motor Vehicle
3. **THE GUJARAT MOTOR VEHICLES RULES, 1989, as amended from time to time.**
 - Chapter I : Preliminary
 - Chapter II : Licensing of Drivers of Motor Vehicles
 - Chapter III : Licensing of Conductors of Stage Carriages
 - Chapter IV : Registration of Motor Vehicles
 - Chapter V : Control of Transport Vehicles
 - Chapter VII : Construction Equipment & Maintenance of Motor Vehicle
4. Gujarat Road Safety Policy 2016-17
5. Motor Vehicle (Driving) Regulations, 2017
6. Gujarat Road Safety Authority Act 2018
7. Supreme Court Committee on Road Safety guidelines
8. National Green Tribunal
9. Traffic Signs, Road Markings and Road Furniture
10. FAME I and FAME II Scheme
11. Good Samaritan Protection and Examination
12. Major road safety components: Helmet, Seat belt, Air bag
13. Road Accident Report, 2022
14. Hit and Run Compensation to Victim Scheme 2022, Scheme for grant of Award to Good Samaritan, Vahan Akasmat Sahay Yojana-2018 (Gujarat Government)
15. World Day of Remembrance (WDR) for Road Traffic Victims
16. Vehicle Speed Limit
17. Landmark Judgement of Hon.Supreme Court related Road safety and Road and vehicle organisation: Like
 - i. in the Supreme Court of India Civil Appeal no. 5826 of 2011
Mukund Dewangan vs the Oriental Insurance Co. Ltd. Etc...
(Regarding No Necessity of obtaining endorsements to drive the transport vehicles when the transport vehicle is class of light motor vehicles (LMV).)

- ii. In the Supreme Court of India writ petition (Civil) No. 265 of 2011 **Avishek Goenka vs Union of India & Anr.**
(Regarding Restriction of use of Black film on the vehicles)
- iii. In the Supreme Court of India writ petition (Civil) No. 235 of 2012 **Save life Foundation & Anr. Vs Union of India & Anr.**
(Regarding No harassment to Samaritans i.e. bystanders for helping road accidents victim)
- iv. In the Supreme Court of India (Civil) appeal No. 11369 of 2018 **Prakash Chand Doga vs Savita Sharma & Anr.**
(Regarding in accidents cases all the liabilities are of vehicles registered owner)
- v. In the Supreme Court of India writ petition (Civil) 510 of 2005 **Maniderjit Singh Bitta vs Union of India & Anr.**
(Regarding Scheme regulating issuance and fixation of High Security Registration Plates (HSRP))
- vi. In the Supreme Court of India writ petition (Civil) No. 243 of 2005 **Rajive Raturi vs Union of India & Others**
(Regarding for Divyang People safe access to road and transport facilities)

NOTE: The above judgements are for example and reference, the candidate shall refer all the relevant judgements for the same.

Part-C (Gujarati)

કુલ પ્રશ્નો-૫૦

કુલ ગુણ -૫૦

1. ગદ્યાર્થગ્રહણ
2. કહવતો
3. રુઢિપ્રયોગો
4. સમાનાર્થી શબ્દો
5. વિરુદ્ધાર્થી શબ્દો
6. જોડણી
7. અલંકાર
8. સમાસ
9. શબ્દ સમૂહો માટે સામાસિક કે પારિભાષિક શબ્દો
10. સંધિ
11. છદં