

These are sample MCQs to indicate pattern, may or may not appear in examination

## University of Mumbai Online Examination 2020

Program: BE Automobile Engineering

Curriculum Scheme: Revised 2012

Examination: Fourth Year Semester VIII

Course Code: AEC802 and Course Name: Vehicle Dynamics

Time: 1 hour

Max. Marks: 50

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Note to the students:- All the Questions are compulsory and carry equal marks .

Q1.	In double conjugate points derivation, G is the
Option A:	Spring center
Option B:	Mass center
Option C:	Pitch center
Option D:	Bounce center
Q2.	The conjugate points in elastic system are called as
Option A:	Double conjugate points
Option B:	Triple conjugate points
Option C:	Elastically conjugate points
Option D:	Dynamic conjugate points
Q3.	Complete the equation, $Y\beta =$
Option A:	CR
Option B:	CF
Option C:	CF +CR
Option D:	CF*CR
Q4.	In Hotchkiss drive, all the loads are taken by
Option A:	Shackle
Option B:	Shock absorber
Option C:	Leaf spring
Option D:	axle
Q5.	Coil spring is having better
Option A:	Load carrying capacity
Option B:	Ride characteristics
Option C:	Roll characteristics

Option D:	Antipitch characteristics
Q6.	The third mode of resonance is at
Option A:	90 Hz
Option B:	60 Hz
Option C:	110 Hz
Option D:	200 Hz
Q7.	Underbody pans are used for
Option A:	Increasing drag
Option B:	Reducing drag
Option C:	Reducing lift
Option D:	Reducing side force
Q8.	The surface of tyre in contact with the road is called as
Option A:	Tread
Option B:	Contact patch
Option C:	Wire bead
Option D:	Side wall
Q9.	The function of steering is
Option A:	To absorb shocks
Option B:	To damp the shocks
Option C:	To control the vehicle direction
Option D:	To control the speed of vehicle
Q10.	The function of shock absorber is
Option A:	To absorb shock
Option B:	To absorb energy
Option C:	To damp the vibrations
Option D:	To absorb heat
Q11.	In the equation of single mass, two degrees of freedom system, the $K_2$ indicates
Option A:	Whether mass will have bouncing mode
Option B:	Coupling between two vibration modes
Option C:	Whether mass will have pitching mode
Option D:	Whether mass will have different modes of vibration
Q12.	Approximately _____ % of drag arises from body profile
Option A:	65
Option B:	50
Option C:	20
Option D:	25
Q13.	The linkages in Ackerman type has a shape of
Option A:	parallelogram

Option B:	Trapezoidal
Option C:	rectangle
Option D:	square
Q14.	The elements of passive suspension are
Option A:	MR damper
Option B:	MR damper and spring
Option C:	Damper and spring
Option D:	Only spring
Q15.	The cornering force generated by tyre is mainly due to
Option A:	Castor angle
Option B:	Slip angle
Option C:	Castor angle
Option D:	Aligning torque
Q16.	Combined cornering and braking is mainly used to check performance of _____ drivers
Option A:	Passenger car
Option B:	Truck driver
Option C:	Bus driver
Option D:	Racing car
Q17.	In double conjugate points equation, K is
Option A:	Mass center
Option B:	Spring center
Option C:	Radius of gyration
Option D:	Pitch center
Q18.	The basic steering movements are
Option A:	Bouncing, pitching, Yawing
Option B:	Bouncing, pitching, rolling
Option C:	Bouncing, Yawing rolling
Option D:	Yawing, pitching, rolling
Q19.	The low inflation pressure is good when tyre is in
Option A:	Concrete road
Option B:	mud
Option C:	sand
Option D:	Tarr road
Q20.	The actuators used in automobile control system are mainly
Option A:	electric
Option B:	Electronic
Option C:	hydraulic
Option D:	pneumatic

Q21.	The CTIS is related to
Option A:	torque
Option B:	Tyre inflation pressure
Option C:	Speed of vehicle
Option D:	Steering angle
Q22.	The steep wind shield angles causes
Option A:	Drag to increase
Option B:	Drag to reduce
Option C:	No change in drag
Option D:	Increases lift
Q23.	When front and rear, both wheels are steered is called as
Option A:	Active ateer
Option B:	Four wheel steer
Option C:	Passive steer
Option D:	Wheel steer
Q24.	The main advantage of independent suspension is
Option A:	Greater roll stiffness
Option B:	Hard ride
Option C:	Camber change
Option D:	Increased load carrying capacity
Q25.	The anti-roll bar is used with _____ suspension
Option A:	passive
Option B:	Self levelling
Option C:	Semi active
Option D:	Active