

Program: BE Mechanical Engineering

Curriculum Scheme: Revised 2012

Examination: Final Year Semester VII

Course Code: MEC701

Course Name: Machine Design-II

Time: 1 hour

Max. Marks: 50

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

Q1.	The circular pitch of a gear is given by (Where d=diameter of pitch circle, t=number of teeth)
Option A:	$\pi d/t$
Option B:	$\pi d/2t$
Option C:	$2\pi d/t$
Option D:	$\pi d/3t$
Q2.	Which of the following pressure angle (in degrees) is commonly used for gears?
Option A:	15
Option B:	20
Option C:	25
Option D:	30
Q3.	Imaginary friction cylinders which by pure rolling together transmit the same motion as pair of gears is known as
Option A:	Pitch cylinder
Option B:	Pitch diameter
Option C:	Pitch circle
Option D:	Pitch point
Q4.	Two different pitch circles generally meet at
Option A:	Pitch cylinders
Option B:	Pitch diameter
Option C:	Pitch circle
Option D:	Pitch point

Q5.	Number of teeth divided by length of pitch circle diameter is known as
Option A:	Circular pitch
Option B:	Diametral pitch
Option C:	Module
Option D:	Gear ratio
Q6.	Module of a spur gear is defined as
Option A:	Dedendum minus addendum
Option B:	Ratio of number of teeth to the pitch circle diameter
Option C:	Ratio of pitch circle diameter to the number of teeth
Option D:	Inverse of number of teeth
Q7.	When face width of gear is too large
Option A:	Gear will have poor capacity to absorb shock loads
Option B:	There will be a possibility of concentration of load at one end of gear tooth
Option C:	There will be problem in lubricating the gear
Option D:	There will be no problem to the gear
Q8.	Which of the bearings given below SHOULD NOT be subjected to a thrust load?
Option A:	Deep groove ball bearing
Option B:	Angular contact ball bearing
Option C:	Cylindrical (straight) roller bearing
Option D:	Single row tapered roller bearing
Q9.	The rated life of bearing varies
Option A:	directly as load
Option B:	Inversely as square of load
Option C:	Inversely as cube of load
Option D:	Inversely as fourth power of load
Q10.	In standard taper roller bearings the angle of taper of outer raceway is
Option A:	5°

Option B:	8°
Option C:	15°
Option D:	25°
Q11.	Attitude is the ratio of
Option A:	ho and dimetral clearance
Option B:	eccentricity and ho
Option C:	eccentricity and dimetral clearance
Option D:	eccentricity and radial clearance
Q12.	High operating temperature
Option A:	allows increase in load
Option B:	affects the minimum film thickness
Option C:	reduces the load carrying capacity
Option D:	affects the maximum film thickness
Q13.	Hydrodynamic journal theory is based on the equation of
Option A:	Petroff
Option B:	Reynold
Option C:	Jhonson
Option D:	Newton
Q14.	Undercutting will occurs,
Option A:	Whenever the radius of curvature of the cam profile is greater than the radius of the roller
Option B:	Whenever the radius of curvature of the cam profile is less than the radius of the roller
Option C:	Whenever the radius of curvature of the cam profile is less than the radius of the base circle
Option D:	Whenever the radius of curvature of the cam profile is greater than the radius of the base circle
Q15.	The cam follower extensively used in air-craft engines is
Option A:	Knife edge follower
Option B:	Flat faced follower
Option C:	Spherical faced follower

Option D:	Roller follower
Q16.	Offset is provided to a cam follower mechanism to
Option A:	Minimise the side thrust
Option B:	Accelerate
Option C:	Avoid jerk
Option D:	Avoid vibration
Q17.	The power transmitted (P) in kW by the roller chain can be expressed by _____ (Where, $P_1$ = Allowable tension, $v$ = average velocity of chain (m/s))
Option A:	$P_1v/1000$
Option B:	$P_1/1000 v$
Option C:	$v/1000 P_1$
Option D:	$P_1v \times 1000$
Q18.	The power rating of the roller chain is not obtained on the basis of following failure criteria
Option A:	Wear
Option B:	Fatigue
Option C:	Impact
Option D:	Length of the chain
Q19.	Which of the drive is a positive drive
Option A:	V belt
Option B:	Flat belt
Option C:	Toothed belt
Option D:	Round belt
Q20.	The minimum number of teeth on the driving sprocket chain drive is
Option A:	7
Option B:	17
Option C:	27
Option D:	37
Q21.	The speed reduction of a single stage chain drive should not be

	more than
Option A:	05:01
Option B:	7:1
Option C:	10:01
Option D:	15:01
Q22.	Multiplate clutch is used in two wheeler because
Option A:	It transmits less torque
Option B:	Size is small for required torque capacity compared to single plate clutch
Option C:	It can dissipate heat effectively
Option D:	Frequent disengagement is required.
Q23.	In cone clutch
Option A:	Outer cone is keyed to driving shaft and inner cone is free to slide on a driven shaft
Option B:	Inner cone is keyed to driven shaft and outer cone is free to slide on a driving shaft
Option C:	Outer cone is free to slide on a driving shaft and inner cone is keyed to driven shaft
Option D:	Outer cone is keyed to driven shaft and inner cone is free to slide on a driving shaft
Q24.	The clutch friction disc always rotates with the
Option A:	Engine crankshaft
Option B:	Flywheel
Option C:	Pressure plate
Option D:	Transmission input shaf
Q25.	In brakes, the wear occurs on the
Option A:	Friction lining
Option B:	Brake drum
Option C:	Lever
Option D:	Friction lining and brake drum