

These are sample MCQs to indicate pattern, may or may not appear in examination  
**University of Mumbai**

**Online Examination 2020**

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

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

Q The ratio of the number of teeth to the pitch circle diameter in millimeters is called ----  
A circular pitch  
B diametral pitch  
C module  
D pitch point

Q An imaginary circle which by pure rolling action, gives the same motion as the actual gear, is called ---  
A addendum circle  
B dedendum circle  
C pitch circle

D clearance circle

Q Lewis equation in spur gear is used to find the

A Buckling stress

B shear stress

C Bending strength

D fatigue stress

Q Calculate the speed ratio (i), if the number of teeth on worm wheel is 60 and worm having double start thread

A 20

B 30

C 40

D 60

Q The contact in two helical gears during mesh

A sudden engagement and disengagement

B is a gradual pick-up of load by the tooth

C depend on speed

D depend on helix angle

Q Material for worm wheel is ---

A aluminium

B Alloy steel

C plain carbon steel

D phospher-bronze

Q When two identical bevel gears are mounted on shafts, which are intersecting at right angles, then they are called ---

A external bevel gears

B crown bevel gears

- C internal bevel gears
- D miter gears

Q What is rpm of bearing, if life of bearing in millions of revolutions=100 , Life in hours=30000hrs

- A 56
- B 560
- C 5600
- D 5.6

Q In a ball bearing, a ball is subjected to

- A tensile stress
- B compressive stress
- C shear stress
- D cyclic stress of fatigue

Q Bearing SKF 6212 is fitted on shaft diameter

- A 72 mm
- B 60 mm
- C 80 mm
- D 100 mm

Q If probability increase then available life of bearing is

- A increased
- B decreased
- C unchanged
- D depend on type of load and duration

Q In hydrodynamic bearings

A The Oil film pressure is generated only by the rotation of the journal

B The oil film is maintained by supplying oil under pressure

- C Do not require external supply of lubricant
- D Grease is used for lubrication
- Q Bearing material should not have
- A High fatigue strength
- B High conformability
- C Low corrosion resistance
- D High thermal conductivity

- Q If hole size is  $120 +63 +00$  and shaft size is  $120 -85 -148$ , values are given in microns then Maximum clearance is
- A 0.211 mm
- B 0.564 mm
- C 0.786 mm
- D 0.120 mm

- Q For low and moderate speed engines, the cam follower should move with
- A uniform velocity
- B simple harmonic motion
- C uniform acceleration and retardation
- D cycloidal motion
- Q Pitch point on a cam is.....
- A any point on pitch curve

- B the point on cam pitch curve having the maximum pressure angle
- C any point on pitch circle
- D the point on cam pitch curve having the minimum pressure angle

- Q Out of following which is not flexible drive
- A Flat Belt

- B Chain drive
- C V belt
- D Gear Drive

- Q In case of belt drive tension in tight side is maintained at 4500 N and at slack side 3200 N . Peripheral velocity is observed as 1.6 m/sec then power transmission capacity of this drive is
- A 1800 Watts
  - B 1300 Watts
  - C 2080 Watts
  - D 2280 Watta

- Q Initial tension in the belt  $T_0$  is given by
- A  $(T_1 - T_2)/2$
  - B  $(T_1 + T_2)/2$
  - C  $(T_1 + T_2) * 2$
  - D  $(T_1 - T_2) * 2$

- Q As per practical limitations, number of teeth on output sprockets are
- A taken greater than 150
  - B Limited to 120
  - C limited to 50
  - D limited to 500

- Q Which type of material belt can be used in acidic work environment?
- A Leather Belt
  - B Cotton or fabric belt
  - C Rubber belt
  - D Balata belts

- Q For the same cross section, power transmission capacity of V belt drive as capared to Flat belt is

- A Greater
- B lesser
- C equal
- D 5 times greater always

Q A cone clutch consists of-

- A Both cylindrical surfaces
- B Both conical surfaces

C Outer conical surface and inner cylindrical surface

D inner conical surface and outer cylindrical surface

Q If there are 7 clutch plates in a multiplate clutch, what is the number of pair of contact surface?

- A 5
- B 4
- C 6
- D 8

Q Where is the clutch located?

- A Between transmission and engine
- B Between transmission and rear axle

C Between transmission and propeller shaft

D Between transmission and differential



