Program: BE Mechanical Engineering

Curriculum Scheme: Revised 2012

Examination: Third Year Semester V

Course Code: MEC504 and Course Name: Theory of Machines II

Time: 1hour Max. Marks: 50

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

Q1.	**1.** The toque transmitted by a single plate clutch is 235.65 N-m,determine the power transmitted by a clutch at a speed 2500 rpm
Option A:	61.693 kW
Option B:	15.24 KW
Option C:	65692 W
Option D:	28.580 KW
Q2.	**2.** In which of following clutch, both direction of axis are possible
Option A:	single plate clutch
Option B:	multi plate clutch
Option C:	cone clutch
Option D:	centrifugal clutch
Q3.	The following is an automatic clutch which is controlled by engine speed
Option A:	cone clutch
Option B:	single plate clutch
Option C:	centrifugal clutch
Option D:	jaw clutch
Q4.	The following type of arrangement is used in synchromesh type gear box.
Option A:	Single plate clutch
Option B:	Fluid clutch
Option C:	Dog clutch
Option D:	Semi-centrifugal clutch
Q5.	The brakes commonly used in railway trains is
Option A:	band brake
Option B:	shoe brake
Option C:	band and block brake
Option D:	internal expanding brake
Q6.	**3.** Double block brake is a type of

Option A:	Band brake
Option B:	Internal expanding shoe brake
Option C:	shoe brake
Option D:	disc brake
Q7.	**4.** In single shoe brake, when is uniform normal pressure observed between block and drum?
Option A:	$\theta < 60^o$
Option B:	$2\ \theta < 90^o$
Option C:	$2\ \theta < 60^o$
Option D:	$\theta > 30$
Q8.	**5.** Which energy is absorbed by the brakes of an elevator during braking process?
Option A:	Potential energy
Option B:	Kinetic energy
Option C:	Mechanical energy
Option D:	Gravitational energy
Q9.	**6.** For two governors A and B, the lift of sleeve of governor A is more than that of governor B, for a given fractional change in speed It indicates that
Option A:	Both governors A and B are equally sensitive B
Option B:	Governor B is more sensitive than governor A
Option C:	Governor A is more sensitive than governor
Option D:	Both governor A and B are not sensitive
Q10.	Which one of the following is dead weight governor
Option A:	hartnell governor
Option B:	Watt governor
Option C:	porter governor
Option D:	hartung governor
Q11.	**7.** Which one of the following is pendulum type governor
Option A:	hartnell governor
Option B:	Watt governor
Option C:	porter governor
Option D:	hartung governor
Q12.	**8.** Which of the following Governor can never be isochronous?
Option A:	Watt Governor
Option B:	Proell Governor

Option C:	Porter Governor
Option D:	Hartnell Governor
Q13.	**9.** The speed range suitable for Watt's governor is____
Option A:	60-80 rpm
Option B:	250-500 rpm
Option C:	20-50 rpm
Option D:	90-120 rpm
Q14.	The fore end of naval ship is also called as
Option A:	bow
Option B:	port
Option C:	star board
Option D:	stern
Q15.	The rotor of a ship rotates in clockwise direction when viewed from the stern and the ship takes a left turn. The effect of the gyroscopic couple acting on it will be
Option A:	to raise the bow and stern
Option B:	to lower the bow and stern
Option C:	to raise the bow and lower the stern
Option D:	to lower the bow and raise the stern
Q16.	In order to maintain contact between inner wheel and ground the sum of vertical reactions at each of the outer and inner wheels should be less than
Option A:	W
Option B:	W/2
Option C:	W/4
Option D:	W/3
Q17.	Which of the following statements is/are false for active gyroscopic couple?
Option A:	Reactive gyroscopic couple and active gyroscopic couple are opposite in direction
Option B:	In right hand rule, curled fingers denote direction of precession
Option C:	In active gyroscopic couple spin vector and precession vector are parallel to each other
Option D:	In right hand rule, curled fingers denote direction spin axis
Q18.	In a simple gear train, if the number of idle gears is odd, then the motion of driven gear will
Option A:	be same as that of driving gear
Option B:	be opposite as that of driving gear

Option C:	depend upon the number of teeth on the driving gear
Option D:	depend on the module of gear
Q19.	Which of the following gear box use double de clutching process?
Option A:	Synchromesh gear box
Option B:	Sliding mesh
Option C:	Constant mesh
Option D:	epicyclic gear box
Q20.	In which of the gearbox all gears are always in contact?
Option A:	Synchromesh gear box
Option B:	Sliding mesh gear box
Option C:	Epicyclic gear box gear box
Option D:	Constant mesh gear box
Q21.	In which type of gear trains, shaft axes which are mounted by gear wheels have relative motion between them?
Option A:	Compounded gear train
Option B:	Simple gear train
Option C:	Epicyclic gear train
Option D:	Reverted gear train
Q22.	In a simple gear train, if the number of idle gears is odd, then the motion of driven gear will
Option A:	Be same as that of driving gear
Option B:	Be opposite as that of driving gear
Option C:	Depend upon the number of teeth on the driving gear
Option D:	Depend upon the number of teeth on the driven gear
Q23.	When the crank is at inner dead centre, in a horizontal reciprocating steam engine, then the velocity of the piston will be
Option A:	Minimum
Option B:	Zero
Option C:	Maximum
Option D:	mean
Q24.	Flywheel is used in
Option A:	Punch press
Option B:	Drilling machine
Option C:	Surface grinder
Option D:	Milling machine

Q25.	In vehicles, flywheel is placed in between
Option A:	Engine and clutch
Option B:	Clutch and Propeller shaft
Option C:	Propeller shaft and Differential
Option D:	Before engine