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## Apply

Examination: 2017 SUMMER

Que.No	Question/Problem	marks
Q 1 i )	Write down the formula of length of belt for open belt drive and cross belt drive.	2
Q1i)	List the methods to reduce the slip in belt and pulley.	2
Q1k)	Define law of gearing.	2
Q 2 d)	Explain condition for maximum power transmission.	4
Q 2 e )	Explain the compound gear train with neat sketch and write down the velocity ratio's equation.	4
Q 3 d)	Find the width of the belt, necessary to transmit 7.5 kW	4
Q4c)	What are the advantages of 'V' belt drive over flat belt drive ?	4
Q 5 c )	A leather belt is required to transmit 7.5 kW from a pulley	8

Examination: 2017 WINTER

Que.No	Question/Problem	marks
Q 1a)(c)	State law of gearing.	2
Q 1a)(d)	State the types of chains & sprockets.	2
Q 2 f)	A flat belt drive is required to transmit 35 kW from a pulley of 1.5 m effective diameter running at speed of 300 rpm.  The angle of contact is spread over 11/24 of the circumference co-efficient of friction for the surface is 0.3.  Determine the maximum t	4
Q3c)	Explain slip and creep phenomenon in belts.	4
Q4a)	State advantages and disadvantages of chain drive over belt drive	4

Que.No	Question/Problem	marks
Q 5 c )	Two pulley, one 450 mm diameter and the other 200 mm diameter are on parallel shafts 1.95 m apart and are connected by a crossed belt. Find the length of the belt required and the angle of contact between the belt and each pulley. What power can be transm	8
Q 6a)(i)	State types of gear train and explain any one.	8

Examination: 2016 SUMMER

Que.No	Question/Problem	marks
Q 1a)(iii)	How are mechanical drives classified?	2
Q 1a)(v)	Write any two disadvantages of chain drive.	2
Q 1b)(iii)	Compare cross belt drive and open belt drive on the basis of: (i) Velocity ratio. (ii) Direction of driven pulley. (iii) Length of belt drives (iv) Application.	4
Q 2 f)	Problem: A shaft runs at 80 rpm & drives another shaft at 150 rpm through belt drive	4
Q3c)	Explain epicyclic gear train with neat sketch.	4
Q5a)	Law of gearing	4
Q5c)	Two parallel shafts, connected by a crossed belt,	8
Q 6a)(i)	Explain sleep and creep phenomenon in belts.	4

Examination: 2016 WINTER

Que.No	Question/Problem	marks
Q 1a)(iv)	Define slip and creep in case of belt drive.	2
Q 1a)(v)	Give four advantages of chain drive over belt drive.	2
Q 1a)(vi)	State the effect of centrifugal tension on power transmission.	2
Q 1b)(iii)	The central distance two shaft is 4m having two pulleys	4
Q 2 f)	A pulley is driven by the flat belt running at speed of	4
Q 3 c )	Compare cross belt drive and open belt drive on the basis of	4
Q 3 f)	Explain with neat sketch working principle of epicyclic gear train.	4

Que.No	Question/Problem	marks
Q4a)	Generally, the lower side is kept "Tight side" and upper side is kept as "Slack side" with the belt drives having small driving pulley and big driven pulley. Why?	4

Examination: 2015 SUMMER

Que.No	Question/Problem	marks
Q 1a)(c)	Define angle of lap and slip in belt drive.	2
Q 1a)(d)	State four conditions under which the 'V' belt drive is selected.	2
Q 1b)(c)	Compare cross belt drive and open belt drive on the basis of	4
Q 2 b )	Explain with neat sketch working principle of Oldham's coupling.	4
Q 2 f)	The central distance between two shaft is 4 m having two pulleys	4
Q 3 d )	State the type of power transmission chains. Describe any one with its sketch.	4
Q4a)	Explain the phenomenon of slip and creep in a belt drive.  State its effect on velocity ratio.	4
Q 5 c )	A belt is required to transmit 10 kW from a motor running at 600 rpm	8
Q 6a)(i)	Define 'Gear Train'. State its purpose and types of gear train.	4

Examination: 2015 WINTER

Que.No	Question/Problem	marks
Q 1a)(iii)	Define slip and creep in the belt.	2
Q 1a)(iv)	State any two advantages of V belt drive over flat belt drive.	2
Q 1b)(iii)	Draw the neat sketch of epicyclic gear train and explain how it works.	4
Q 3 c )	Formulae to calculate the length of open belt drive and length of Cross belt drive	4
Q4a)	What is centrifugal tension? State its formula. Explain its effect on power transmitted by a belt drive	4

Que.No	Question/Problem	marks
Q 5 c )	Problem:Two parallel shafts whose centre line are 4.8 m apart, are connected by open belt drive.	8
Q 6a)(i)	State and explain law of gearing with the help of suitable sketch.	4