
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
Q 1 i)	List the methods to reduce the slip in belt and pulley.	2
Q 1 k)	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
Q 4 c)	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
Q 3 c)	Explain slip and creep phenomenon in belts.	4
Q 4 a)	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

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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
Q 3 c)	Explain epicyclic gear train with neat sketch.	4
Q 5 a)	Law of gearing	4
Q 5 c)	Two parallel shafts, connected by a crossed belt,.....	8
Q 6a)(i)	Explain sleep and creep phenomenon in belts.	4

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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
Q 4 a)	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
Q 4 a)	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
Q 4 a)	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