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Examination: 2017 SUMMER

Que.No	Question/Problem	marks
Q 2b)(l)	State and explain two most important reasons for adopting involute curves for a gear tooth profile	8
Q 5a)(i)	(i) Show that the efficiency of a self locking screw is less than 50%	8
Q 5a)(ii)	What is self locking property of threads and where it is necessary?	8
Q 5b)(ii)	Explain the terms self locking and overhauling of screw.	8
Q 6 a)	Draw profiles to square and Acme threads with full details. Which one is stronger?	4

Examination: 2017 WINTER

Que.No	Question/Problem	marks
Q1g)	Define following terms of spring:	2
Q 1 i)	Draw the different thread profiles used for power screws.(Draw any four thread profiles)	2
Q4c)	<u>Design of screw jack</u>	8
Q5b)	Power Screw: Given Data	8

Examination: 2016 SUMMER

Que.No	Question/Problem	marks
Q 1 iv)	Why square threads are preferred over V-thread for power transmission?	4

Que.No	Question/Problem	marks
Q 5 a)	A screw jack is used to lift a load of 50 kN through a maximum lift of 200 mm. The material used for a screw is steel of allowable stresses in tension and compression as 100 N/mm2 and 50 N/mm2 respectively. The pitch of screw is 8 mm. The nut is made of p	8
Q 5c)(i)	Show that the efficiency of self locking screw is less than 50%	8
Q6b)	Square thread	4

Examination: 2016 WINTER

Que.No	Question/Problem	marks
Q 1a)(iv)	Draw neat labeled sketches of Acme and square thread profile and state its relative characteristics.	4
Q 5 a)	A power screw on a machine has single start square thread with a non rotating bronze nut. Axial force on the screw is 15 kN. Allowable stresses for screw material in compression and shear are 85 MPa and 37 MPa respectively. Allowable bearing pressure for	8
Q 5c)(ii)	State two engineering applications of each of Acme and Buttress thread profiles with neat sketches.	8

Examination: 2015 WINTER

Que.No (Question/Problem	marks
11 12111111	State four different thread profiles used in power transmission. Draw neat sketches of any two of them.	4
U 5 a 1	A vertical double start square threaded screw of 120 mm mean	8
Q 5c)(ii)	Explain the terms self locking and overhauling of screw.	8