

SUBJECT CODE NO:- P-319
FACULTY OF ENGINEERING AND TECHNOLOGY
B.E.(Mech) Examination May/June 2017
Machine Tool Design [Elective-II]
(Revised)

[Time: Three Hours]

[Max.Marks:80]

Please check whether you have got the right question paper.

N.B

- 1) attempt any three question from each section .
- 2) assume suitable data if required .
- 3) figure to the right indicates full marks .

Section A

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|-----|--|----|
| Q.1 | a) Explain hydraulic transmission and its elements. | 07 |
| | b) What are the economics of machine tool selections? | 06 |
| Q.2 | a) What are the trends of development of future machine tool ? | 07 |
| | b) What are the forces acting on tool in turning process ? | 06 |
| Q.3 | a) Explain stepless regulation of speed and feed rates . | 07 |
| | b) What are the various steps for selection of best structural diagram ? | 06 |
| Q.4 | a) What are the various profiles of machine tool structure ? | 07 |
| | b) What are the materials of machine tool structure ? | 06 |
| Q.5 | Write short note on any two | 14 |
| | a) Acceptance test for machine tools . | |
| | b) Special cases of gearbox design . | |
| | c) Design of bed . | |

Section B

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|------|---|----|
| Q.6 | a) What are the function and requirements of guideways ? | 07 |
| | b) What are the methods of adjusting clearances in guideways. | 06 |
| Q.7 | a) What are the combination guideways and its applications ? | 07 |
| | b) Explain basic design procedure of machine tool structure . | 06 |
| Q.8 | a) What are the materials of guideways ? | 06 |
| | b) What are the effect of machine tool compliance on machining accuracy ? | 07 |
| Q.9 | a) Explain machine tool elastic system | 06 |
| | b) What are the dynamic characteristics of elements and systems in machine tools? | 07 |
| Q.10 | Write short notes on any two :- | 14 |
| | a) Anti-friction bearings | |
| | b) Forced vibration of machine tools | |
| | c) Equivalent elastic system in machine tools | |