

Total No. of Printed Pages:01

SUBJECT CODE NO: H-221
FACULTY OF SCIENCE AND TECHNOLOGY
B.E. (Mechanical)
Elective-II: Machine Tool Design
(REVISED)

[Time: Three Hours]

[Max.Marks: 80]

Please check whether you have got the right question paper.

- N.B
- i) Solve any three questions form each section
 - ii) Figures to the right indicate full marks
 - iii) Assume suitable data if required & state it clearly

Section A

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|-----|---|----|
| Q.1 | a) Explain working & auxiliary motions in machine tool. | 06 |
| | b) Describe by using schematic diagram a translatory hydraulic drive. | 07 |
| Q.2 | a) Write a short note on layout of a machine tool | 08 |
| | b) Discuss acceptance tests of machine tools | 05 |
| Q.3 | Describe the design of speed box that are employed for stepped regulation | 13 |
| Q.4 | a) Discuss step less regulation of speed and feed rates | 07 |
| | b) Describe the materials of machine tool structure | 06 |
| Q.5 | a) Explain static stiffness of machine tool structure. | 07 |
| | b) Discuss profiles of machine tool structure | 07 |

Section B

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|------|--|----|
| Q.6 | a) What are the different shapes of slide ways? Explain with neat sketch | 07 |
| | b) Discuss materials of slide ways. | 06 |
| Q.7 | a) How clearance is adjusted in slide ways? Explain its methods. | 07 |
| | b) Explain combination guide ways. | 06 |
| Q.8 | Discuss design calculations of spindles. | 13 |
| Q.9 | a) Write a short note on antifriction bearings | 06 |
| | b) Describe in detail sliding bearings | 07 |
| Q.10 | a) What are the dynamic characteristic of the equivalent elastic system? Explain | 07 |
| | b) Discuss forced vibration of machine tools | 07 |