

**DIPLOMA VIEP MECHANICAL ENGINEERING
(DMEVI)**

00154

Term-End Examination

June, 2014

BIME-033 : MACHINES TOOLS

Time : 2 hours

Maximum Marks : 70

Note : Attempt total five questions. Question no. 1 is compulsory. Question and four questions are to be attempted out of question no 2 to 7.

1. Write the correct answer of the following questions : **2x7=14**
- (a) In machine tools Chatter is due to :
- (i) Free vibrations
 - (ii) Ranclon vibrations
 - (iii) Cutting vibrations
 - (iv) Self-excited vibrations
- (b) The workpiece motion and tool motion respectively in a horizontal boring machines are :
- (i) Stationary and rotational
 - (ii) Rotational and translation
 - (iii) Rotational with translation and Stationary
 - (iv) Stationary and rotational with translation

2. (a) How is the size of a lathe determined ? 4
(b) What is Carriage ? Explain its various parts with help of a neat sketch. 10
3. (a) What are portable 'drill' and where are they used ? 4
(b) What is 'Reaming' ? Sketch a 'Reamer' and show its different parts on it. What do you understand by 'Hand of Reamer' ? 10
4. (a) How do you classify Planners ? 4
(b) Describe the main parts of a slotting machine. 10
5. (a) How will you proceed to mount a grinding wheel ? 7
(b) What are the indexing or dividing heads ? What are their functions ? 7
6. (a) Why is it necessary to know the 'toughload' on a broach ? How do you calculate it ? 7
(b) Explain the advantages and limitations of Numerical Control Machine Tools. 7
7. Write short notes on **any two** :
(a) FMS 2x7=14
(b) Steady rest and Follower rest
(c) Milling Cutters
(d) Work holding devices in shaper
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