BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION)

CLASS: BE **SEMESTER: VI**
BRANCH: PROD. **SESSION : SP/2018**

SUBJECT : PE6001 TOOL DESIGN

TIME: 1.5 HOURS **FULL MARKS: 25**

INSTRUCTIONS:
1. The total marks of the questions are 30.
2. Candidates may attempt for all 30 marks.
3. In those cases where the marks obtained exceed 25 marks, the excess will be ignored.
4. Before attempting the question paper, be sure that you have got the correct question paper.
5. The missing data, if any, may be assumed suitably.

Q1 (a) Write difference between jigs and fixtures. [2]
(b) How locating is done from plane surfaces / circular surfaces / irregular surfaces? Explain with examples. [3]

Q2 (a) With the help of neat diagram explain a strap clamp. [2]
(b) Calculate the diameter of a diamond pin placed at 45 ± 0.15 distance from a plane surface if the locating hole in the work piece D is 55.55/55.596 and engagement width W of the pin is 7. [3]

Q3 (a) With the help of neat diagram explain a fixture which can be used to hold a bar stock type of work piece. [2]
(b) Write short notes on : [3]
a) Fixed bush b) liner bush c) slip type renewable bush

Q4 (a) What is indexing? Differentiate between linear and rotary indexing. [2]
(b) List different types of milling fixture. Explain any one with neat sketch. [3]

Q5 (a) With a neat sketch explain the different constructional and technological components of a die assembly? [5]

Q6 (a) Differentiate between compound and combination die. [2]
(b) With the help of neat diagram explain a die-set which can be used for making a circular washer in each stroke of press at two workstations. [3]

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