KERALA AGRICULTURAL UNIVERSITY

B.Tech. (Food Engg.) 2017 Admission

I Semester Final Examination-January-2018

Meen.1101 **Production Technology (2+1)** **Marks:50**

Time: 2 hours

I **Fill in the blanks:** **(10x1=10)**

1 In steels carbon forms----------solid solution with iron atoms.

2 Conversion of coarse grained steel into fine grained steel by heating cooling cycle is called ----------

3 ----------allowance facilitates easy removal of pattern from the mould.

4 ----------is a casting defect due to lack of fluidity of the cast metal.

5 ----------added to aluminium increases fluidity during casting.

State True or false

6 In straight polarity work piece is connected to the positive terminal of the power supply

7 TIG welding uses a consumable electrode.

8 Negative rake angle decreases tool strength.

9 In up milling the work is fed in the direction of cutter rotation.

10 Tapping is used to produce holes in metals.

II **Write Short notes on ANY FIVE of the following** **(5x2=10)**

1 What is cementite?

2 Explain creep.

3 What is the purpose of adding chromium to steel?

4 What is lapping?

5 What are the advantages of forging over casting?

6 What are the advantages of abrasive water-jet machining?

7 What are the different types of chips formed during metal cutting ?

III **Answer ANY FIVE of the following** **(5x4=20)**

1 With neat sketches explain the differences between up-milling and down milling process.

2 Explain the difference between cold working and hot working of metals

3 Explain the different allowances used for the patterns.

4 Explain the steps involved in investment casting.

5 Explain the functions of different angles in a lathe cutting tool

6 Explain a fly press used for sheet metal working.

7 Differentiate between oblique and orthogonal cutting.

IV **Write an essay on ANY ONE of the following** **(1x10=10)**

1 With neat sketches explain any two resistance welding processes.

2 Explain with sketches the different methods for taper turning in lathe. What are the applications of each method ?

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