



KERALA AGRICULTURAL UNIVERSITY
B.Tech.(Agri. Engg) 2018 Admission
II Semester Final Examination- June 2019

Fpme.1201

Workshop Technology and Practices (1+2)

Marks: 50
Time: 2 hours
(10x1=10)

I Fill in the blanks

- 1 _____ of a material is its ultimate strength in tension.
- 2 Split patterns when mounted with one half on one side of a plate and the other half directly opposite on the other side of that plate, the pattern is called a _____ pattern.
- 3 _____ is a high-temperature ionized gas that occurs or gets generated in an electric arc between two electrodes.
- 4 For holding steel drill-bits up to about 14 mm in diameter, which are ~~having~~ _____ ~~drills,~~ drill chuck often called Jacob's chuck, is used.
- 5 In _____ cutting, the cutting edge of tool remains at right angle to the direction of motion of the tool or the work

State true /false

- 6 A dowel joint is the reverse of the mortise and tenon joint, and is often called the open mortise and tenon joint.
- 7 Piercing is employed to produce seamed tubes or pipes.
- 8 A neutral flame is one in which there is an excess of acetylene.
- 9 The main property of divisibility of material is taken advantage of in the casting of steel pulleys.
- 10 A plain mandrel is a device for holding and rotating on a lathe a hollow piece of work having internal thread.

II Write Short notes on any FIVE of the following

(5x2=10)

- 1 Control-interlocking for safety in a plant
- 2 Artificial/Kiln seasoning of wood
- 3 Brazing
- 4 Gating system in moulding
- 5 Die casting
- 6 Universal shaper
- 7 End milling

III Answer any FIVE of the following.

(5x4=20)

- 1 Describe briefly the following four types of carpentry chisel:
a) Firmer chisel b) Dovetail chisel c) Mortise chisel d) Gouge chisel
- 2 Draw the neat diagrams of the following four types of joint made in gas welding:
a) Square butt-weld b) Single V-weld
c) Single fillet-lap-weld d) Corner fillet-weld
- 3 Explain briefly about the following two types of core in moulding:
a) Horizontal core b) Balanced core
- 4 What are meant by the following terms coming under twist-drill-bit nomenclature?
a) Chisel edge b) Tang c) Flute and its four functions d) Land

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- 5 Explain briefly the operation of straight turning in a lathe operation.
- 6 Show with the aid of neat drawings the main effect produced on a short mild-steel bar due to the following when upsetting in smithy. Need to make, only the drawings.
 - a) Heavy hammer blows on a uniformly heated bar.
 - b) Comparatively light hammer blows on a uniformly heated bar.
 - c) Light hammer blows on a bar heated only at the end placed on the anvil surface.
 - d) Medium hammer blows on a bar heated only at the middle.
- 7 Describe briefly about flux-cored arc welding.

IV Answer any ONE of the following (1x10=10)

- 1 Explain plant layout involving Process Layout, and Product Layout, indicating what these are, and their merits and demerits.
- 2 Explain lathe carriage involving Saddle, Cross-slide, Compound rest/slide, Tool post, and Apron, explaining what these are, and their functions.
