Assignment 4

The due date is 2020-02-25, 23:59:00.
As per our records you have not submitted this assignment.

1) In casting, gating ratio is defined as the ratio of:
   - sprue area: total runner area: total cavity area:
   - sprue area: total runner area: total cavity area:
   - total runner area: total cavity area: sprue area:
   - total cavity area: total sprue area: total runner area:
   - total runner area: total sprue area: sprue area:
   - sprue area: total runner area: total cavity area:
   - No, the answer is incorrect.
   - Accepted Answers:

2) In which of the gating system molten metal flows into the mould cavity against gravity?
   - Try gating
   - Before gating
   - During gating
   - After gating
   - No, the answer is incorrect.
   - Accepted Answers:

3) In gating system, sprue is usually tapered to:
   - Avoid air impaction effect
   - Quickly fill the mould cavity
   - Minimise the temperature:
   - All of the above
   - No, the answer is incorrect.
   - Accepted Answers:

4) The major function of chills is that:
   - Controls the free flow of molten metal
   - Controls the temperature of molten metal
   - Reduces the air impaction effect
   - Controls the solidification time
   - No, the answer is incorrect.
   - Accepted Answers:

5) The optimum pouring time for a casting depends on several factors. One important factor among them is:
   - Location of riser
   - Quantity of sand used
   - Fluidity of casting metal
   - Area of pouring point
   - No, the answer is incorrect.
   - Accepted Answers:

6) A mould has a shown sprue whose length is 20 cm and the cross-sectional area at the base of shown sprue is 1 cm². The shown sprue feeds a horizontal runner leading into the mould cavity of volume 1000 cm³. The time required to fill the mould cavity will be:
   - 4.6 sec
   - 5.6 sec
   - 6.0 sec
   - 6.2 sec
   - No, the answer is incorrect.
   - Accepted Answers:

7) In a sand casting process, a sprue of 15 mm base diameter and 250 mm height leads to a runner which fills a cubical metal cavity of 100 cm³. The volume flow rate (in cm³/sec) and the mould filling time (in seconds) are:
   - 0.01 m³/s, 2.8 sec
   - 1.01 m³/s, 1.54 sec
   - 1.57 m³/s, 1.78 sec
   - 2.36 m³/s, 8.41 sec
   - No, the answer is incorrect.
   - Accepted Answers:

8) A cylinder of 150 mm diameter & 200 mm height is to be cast without any sprue. The cylinder is moulded initially in the drag of a vertical grain mould in two parts. The cope of the flask is 200 mm height & the height of mould during pouring is 10 mm above the cope. A liquid sprue is employed & the gating ratio is 1:2:3. The time taken (in seconds) to fill the cavity exactly following the die, if the sprue area is 400 mm²:
   - 2
   - 4
   - 8
   - 16
   - No, the answer is incorrect.
   - Accepted Answers:

9) A mould having dimensions 160 mm x 90 mm x 20 mm is filled with molten metal through a gate with height ‘H’ and cross-sectional area, A, the mould filling time ‘t’, the height is now quadrupled and the cross-sectional area is halved. The corresponding filling time ‘t1’, the ratio: A, H, t:
   - 4
   - 1
   - 4
   - 4
   - No, the answer is incorrect.
   - Accepted Answers:

10) For a typical gating system of Mg alloys, there are three pipes and the cross sectional area of each pipe is half of the area of the runner but one half of the sprue area. The runner has cross section area equal to twice the area at the bottom of sprue. The gating ratio of the system will be:
   - 2.5:1
   - 3.0:1
   - 2.0:1
   - 2.0:1
   - No, the answer is incorrect.
   - Accepted Answers:

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