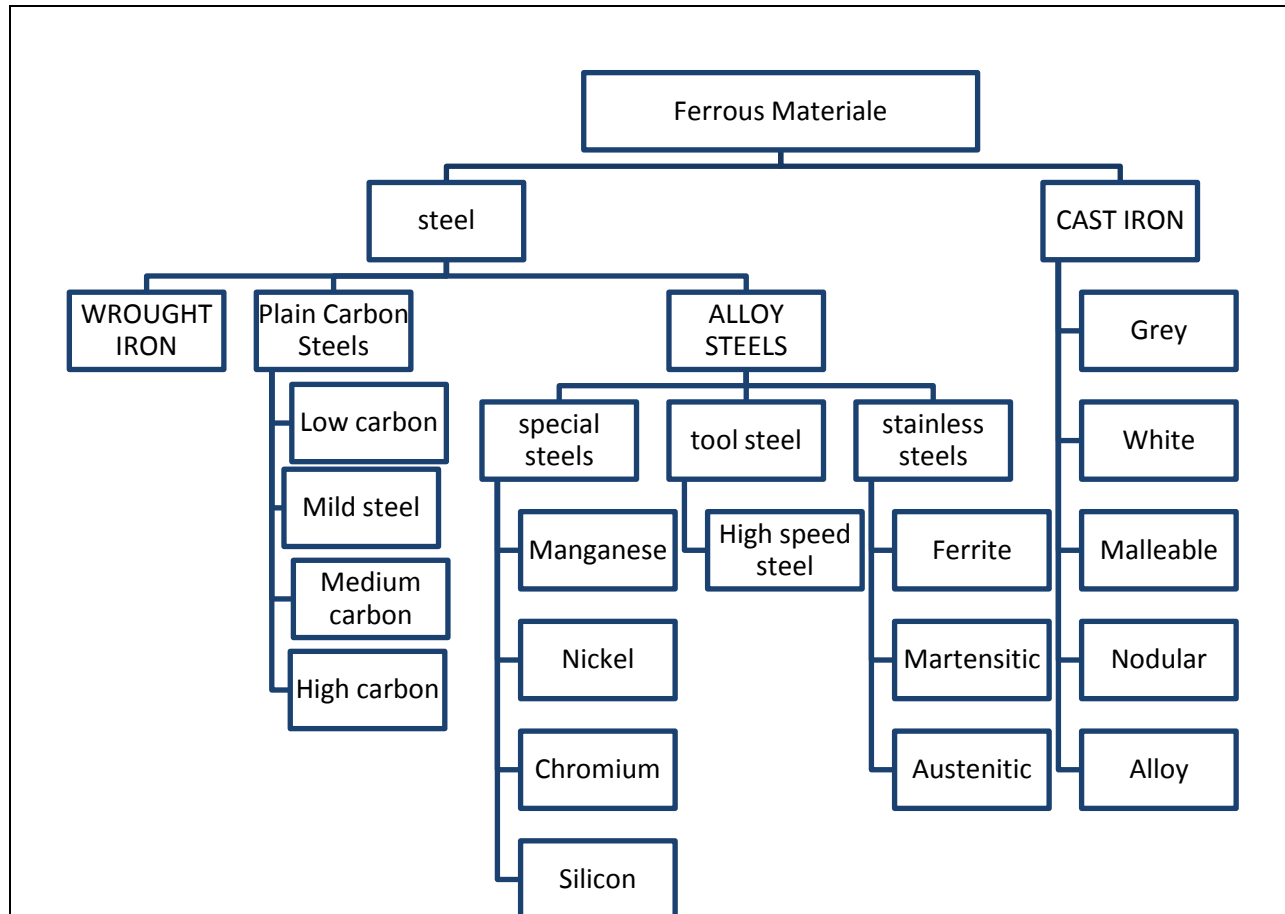


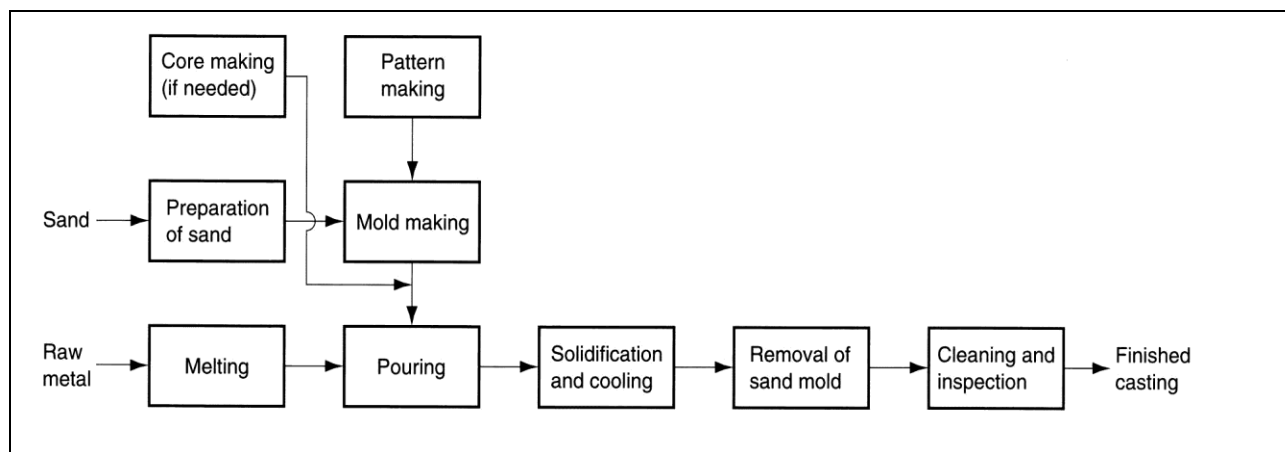
اجب في ورقة الاسئلة واستخدم ورقة الاجابة للحسابات والمسودات فقط

Question 3

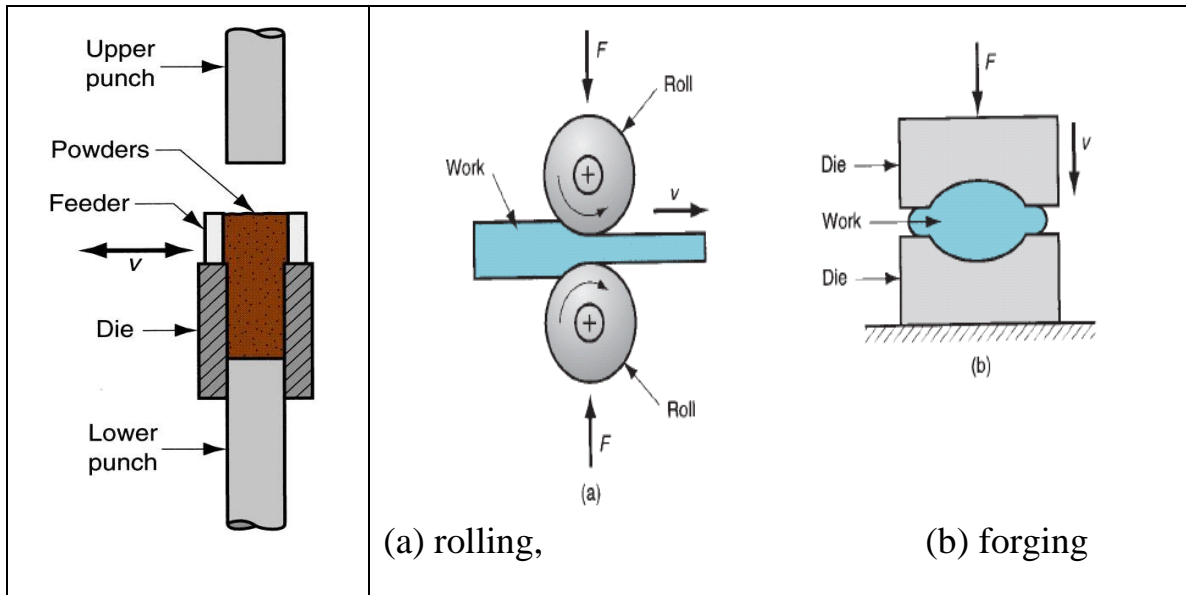
1. Classify the Ferrous material [5 marks]



2. Draw the sketch of Sand Casting Production Sequence [5 marks]



3. Give the name of each part [5 marks]



4. Sign (X) for true statements only [5 marks]

ضع علامة (X) امام العبارات الصحيحة فقط

1		Product variety direct proportion with production quantity
2	X	In case hardening process; provides a soft surface while the core remains hard
3	X	In plain Carbon Steels, as the carbon percentage increases the ductility decreases
4		Holding time in heat treatment processes depend on the carbon percentage
5	X	The materials in Expendable mold processes are sand or plaster
6	X	A pouring cup is often used to reduce the splash
7	X	Warm Working operations are performed at below the recrystallization temperature.
8	X	Higher mesh count = smaller particle size
9		The mean disadvantage of ferrous materials is stronger
10		Medium carbon steel having carbon between 0.15 –0.3%

5. Select the correct answer in the following sentences (more correct answer) [5 marks]
اختر الاجابات الصحيحة لكل جملة (اكثر من اجابة صحيحة لكل جملة)

1	b- d	Which of the following are Secondary industries: (a) Fishing,(b) Aerospace, (c) Hotel, (d) Tire and rubber
2	a-b-f	Which of the following are sheet metalworking operations: (a) bending, (b) deep drawing, (c) extrusion, (d) forging, (e) rolling, and (f) shearing?
3	a-c-e-f	Which of the following are advantages and characteristics of hot working relative to cold working (more than one)? (a) fracture of workpart less likely, (b) increased strength properties, (c) isotropic mechanical properties, (d) less overall energy required, (e) lower deformation forces required, and (f) more significant shape changes are possible.
4	b-c-d	Which of the following are advantages of PM: (a) storing, (b) mass produced, (c) subsequent machining, (d) porous metal, (e) Variations in density
5	a-d-e	The disadvantages for different casting processes are: (a) mechanical properties, (b) mass production, (c) large parts, (d) surface finish, (e) Environmental, (f) dimensional

Dr. saleh kaytbay