

Scheme of Examination:

ONE question from part -A: 20 Marks

ONE question from part -B: 20 Marks

Viva -Voice: 10 Marks

Total : 50 Marks

FOUNDRY AND FORGING LABORATORY

Sub Code	: 10MEL 38A / 48A	IA Marks	: 25
Hrs/week	: 03	Exam Hours	: 03
Total Lecture Hrs	: 48	Exam Marks	: 50

PART – A

1. Testing of Moulding sand and Core sand

Preparation of sand specimens and conduction of the following tests:

- 1 Compression, Shear and Tensile tests on Universal Sand Testing Machine.
- 2 Permeability test
- 3 Core hardness & Mould hardness tests.
- 4 Sieve Analysis to find Grain Finest number of Base Sand
- 5 Clay content determination in Base Sand

PART – B

2. Foundry Practice

Use of foundry tools and other equipments.

Preparation of moulds using two moulding boxes using patterns or without patterns. (Split pattern, Match plate pattern and Core boxes).


Preparation of one casting (Aluminum or cast iron-Demonstration only)

PART – C

3. Forging Operations :

- Calculation of length of the raw material required to do the model.

19



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- Preparing minimum three forged models involving upsetting, drawing and bending operations.
- Out of these three models, at least one model is to be prepared by using Power Hammer.

Scheme of Examination:

One question is to be set from Part-A: 10 marks

One question is to be set from either

Part-B or Part-C: 30 marks

Calculation part in case of forging is made compulsory

Calculation (Forging)	+ Foundry Model	= 05 + 25 = 30 Marks
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Calculation (Forging)	+ Forging Model	= 05 + 25 = 30 Marks
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Viva-Voce : 10 marks.

Total : 50 Marks.

MACHINE SHOP

Sub Code	: 10MEL 38A / 48A	IA Marks	: 25
Hrs/week	: 03	Exam Hours	: 03
Total Lecture Hrs	: 48	Exam Marks	: 50

PART – A

Preparation of three models on lathe involving Plain turning, Taper turning, Step turning, Thread cutting, Facing, Knurling, Drilling, Boring, Internal Thread cutting and Eccentric turning.

PART – B

Cutting of V Groove/ dovetail / Rectangular groove using a shaper.
Cutting of Gear Teeth using Milling Machine.

Scheme of Examination:

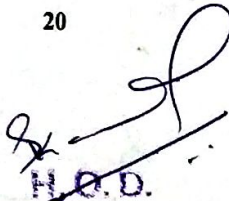
ONE question from part -A: 30 Marks

ONE question from part -B: 10 Marks

Viva -Voice: 10 Marks

Total : 50 Marks

20


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