



ID NO.	
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PRESIDENCY UNIVERSITY, BENGALURU
SCHOOL OF ENGINEERING

Weightage: 40 %

Max Marks: 80

Max Time: 2 hrs.

10 May 2018, Thursday

ENDTERM FINAL EXAMINATION MAY 2018

Even Semester 2017-18

Course: **MEC 221 Advanced
Production Techniques**

IV Sem. Mechanical

Instructions:

- (i) *Read the question properly and answer accordingly.*
- (ii) *Question paper consists of 3 parts.*
- (iii) *Use Pencil to draw diagrams*

Part A

(5 Q x 4 M = 20 Marks)

1. Explain Embossing with a neat cross-sectional sketch.
2. Name any four Nondestructive Weldments evaluation tests
3. Explain spinning with a diagram.
4. Differentiate between Laser beam welding and Electron beam welding.
5. Write the classification of joining process.

Part B

(3 Q x 10 M = 30 Marks)

6. Explain shielded metal arc welding with a diagram labelling all the parts. State its advantages and its applications.
7. Name 5 welding defects and explain any 3 in brief.
8. Explain Electron beam welding with a diagram. Also state its advantages and disadvantages.

Part C

(2 Q x 15 M = 30 Marks)

9. Select a suitable welding process to join railroads. State its principle and its working with a neat diagram.
10. Explain the following resistance welding process with a neat sketch
 - a. Spot Welding
 - b. Seam welding
 - c. Projection welding



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Weightage: 20%

Max Marks: 40

Max Time: 1 hr.

02 April Monday 2018

TEST – 2

SET A

Even Semester 2017-18 Course: **MEC 221 ADVANCED PRODUCTION** IV Sem. Mechanical
TECHNIQUES

Instruction:

- (i) Read the question properly and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Write neat diagram/sketches with pencil only.
- (iv) Pen & Handwritten sketches are strictly not entertained.

Part A

(4 Q x 4 M = 16 Marks)

1. Define hot and cold working with an example.
2. What is rolling process? Explain with a neat sketch.
3. Explain forging? Name any four materials that can be forged?
4. Define and explain the advantages of sand casting.

Part B

(2 Q x 6 M = 12 Marks)

5. Identify suitable manufacturing process to produce solid castings like wheels, rings, rollers, sheaves, pulleys, flywheels, gear blanks. Explain the process with a neat sketch.
6. Explain planetary rolling mill with a neat sketch.

Part C

(1Q x 12 M = 12 Marks)

7. With a neat sketch explain the construction features of cupola furnace.

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Weightage: 20 %

Max Marks: 40

Max Time: 1 hr.

23 Feb Friday 2018

TEST – 1

Even Semester 2017-18

Course: **MEC 221 ADVANCED PRODUCTION
TECHNIQUES**

IV Sem. Mechanical

Instruction:

- (i) Read the question properly and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Write neat diagram/sketches with pencil only.

Part A

(4 Q x 4 M = 16 Marks)

1. Define Casting and explain the following terms
 - a). Runner
 - b). Gate
2. Explain sweep pattern with a neat figure & state its applications.
3. Identify the pattern allowance which is given to surfaces in a direction perpendicular to parting line. Explain it with a neat sketch.
4. The casting shown in fig.1 is to be made in plain carbon steel using a wooden pattern. Assuming the shrinkage allowance as 21 mm/m, calculate the dimensions of the pattern

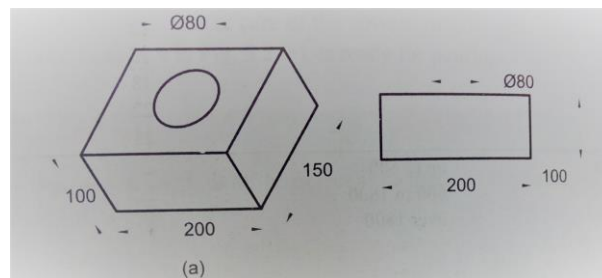


Fig.1

Part B

(2 Q x 8 M = 16 Marks)

5. With a neat diagram explain the sieve analysis test and calculations of grain fineness number.
6. Explain the following casting defects terminologies with sketches.
 - a). Misrun
 - b). Cold Shut
 - c). Shrinkage Cavity
 - d). Mold shift

Part C

(1Q x 8 M = 8 Marks)

7. Explain laminated object manufacturing with a neat sketch & label all parts.