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**Presidency University**

**Bengaluru**

**SCHOOL OF ENGINEERING**

**MAKEUP EXAMINATION – July 2024**

**Date**: 3-JULY-2024

**Time**: 1:30 PM – 4:30 PM

**Max Marks**: 100

**Weightage**: 50%

**Course Code** : MEC 2013

**Course Name**: Production Technique

**Program** : B.Tech - MECH

**Instructions:**

1. *Answer the questions to the point.*
2. *Scientific and non-programmable calculators are allowed.*

**Part A**

**Answer any TEN questions. Each question carries TWO marks. (10QX2M=20)**

1. List out the common materials used in pattern. (CO1) [Knowledge]
2. What are the limitations of sand casting? (CO1) [Knowledge]
3. What is the use of vent holes? (CO1) [Knowledge]
4. What are the element of gating system used in casting? (CO1) [Knowledge]
5. What is fusion welding? (CO2) [Knowledge]
6. What are the different types of defects in joining process? (CO2) [Knowledge]
7. What are the applications of brazing? (CO2) [Knowledge]
8. What is plastic deformation process? (CO3) [Knowledge]
9. List out the advantages of cold working process. (C03) [Knowledge]
10. What is forging? Give the classification. (C03) [Knowledge]
11. What is gang milling? (C04) [Knowledge]
12. What are the operations performed on drilling machine? (CO4) [Knowledge]

**Part B**

**Answer any FIVE questions. Each question carries EIGHT marks. (5Qx8M=40)**

1. Moulding sand is used to make the casting of different parts in industries. Briefly explain

any four important properties of moulding sand. (CO1) [Comprehension]

1. Different joining techniques are used depending upon the applications. Differentiate between welding, brazing and soldering (CO2) [Comprehension]
2. Differentiate between hot working and cold working process in metal forming with examples (CO3) [Comprehension]
3. In rolling plastic deformation of metal take place when passed through the rollers. Explain the cluster milling process used in rolling to plastic deform metals with neat sketch (CO3) [Comprehension]
4. Lathe machine is used to produce parts of product. Explain any four operations performed on lathe machine. (CO4) [Comprehension]
5. Explain any four operations performed on the milling machine (CO4) [Comprehension]

**Part C**

**Answer FOUR questions. Each question carries TEN marks. (4Qx10M=40**)

1. Casting is carried out to produce components of products. Explain the Investment casting process in detail with its advantages. (CO1) [Comprehension]
2. Joining process are employed to make permanent bonding of work pieces. With neat sketch explain the Metal inert gas (MIG) welding process and list out the advantages. (CO2) [Comprehension]
3. With neat sketch explain the metal arc welding process with its applications.

(CO2) [Comprehension]

1. Explain the tube drawing process with the fixed mandrel or plug for drawing operation.

(CO3) [Comprehension]

1. Drilling machines are used make circular holes of different sizes. Explain the different parts of the drilling machine with its functions. (CO4) [Comprehension]