Seat No: _____ **Enrollment No: _____**

PARUL UNIVERSITY

FACULTY OF ENGINEERING & TECHNOLOGY

M.Tech. Winter2019–20 Examination

Semester: 1 **Date:17/12/2019**
Subject Code: 203208102 **Time:10:30 am to 01:00 pm**
Subject Name: Advanced casting technology **Total Marks: 60**

Instructions:
1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 A) Define casting process. Enlist merit and limitation of casting process as compare to other manufacturing processes. **(05)**

B) Discuss about high pressure die casting process with its process parameter. **(05)**

C) List the characteristics of moulding sand and describe in brief. **(05)**

Q.2 **Answer the following questions**. (Attempt any three) (Each five mark) **(15)**

A) Define Pattern. List different types of pattern and explain any two of them with neat sketch.

B) State the difference between CO2– Silicate casting and die casting process.

C) How many types of moulding sand are available for casting process? Write down about any two with practical application

D) Explain different types of core. Define its important in casting process and also describe its making process.

Q.3 A) Enlist the types of centrifugal casting process. Discuss any one of them in detail. **(07)**

B) Explain construction of Cupola furnace with neat sketch. **(08)**

OR

B) Calculate the gating requirements for the casting shown in Fig. 1 **(08)**

Q.4 A) What is the importance of Post processing in metal casting? List different methods used for the post processing and explain any one in detail. **(07)**

OR

A) Enlist various parts for gating system with net sketch and explain importance of each for quality of casting. **(07)**

B) Which parameters affect casting solidification process? How solidification influence quality of casting? List the related defects occurs due to issues related to solidification. **(08)**

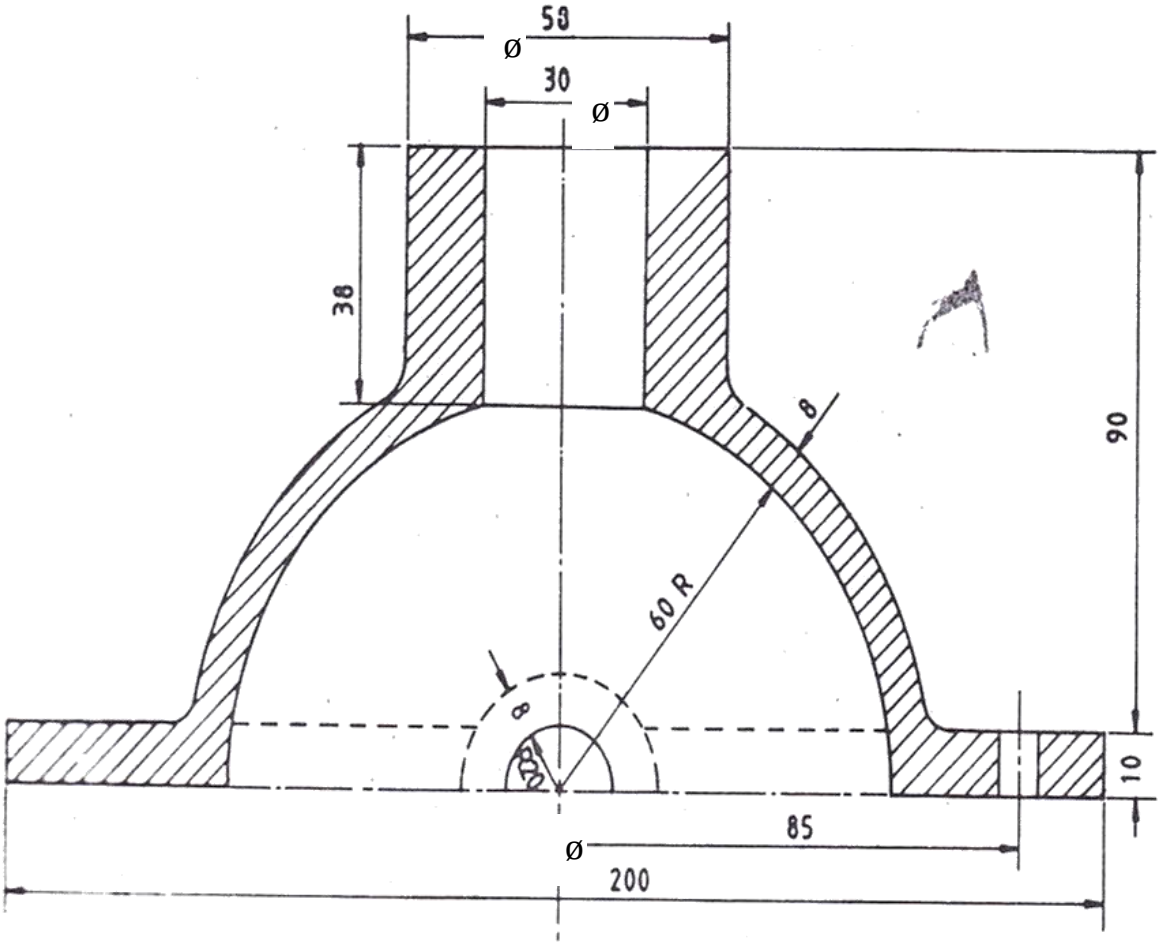

Fig.1
All dimensions are in mm