

BACHELOR OF TECHNOLOGY (C.B.C.S.) (2020 COURSE)
B.Tech.Sem - IV R&A :SUMMER- 2022
SUBJECT : MANUFACTURING TECHNOLOGY-I

Day : Wednesday
Date : 22-06-2022

S-24789-2022

Time : 10:00 AM-01:00 PM
Max. Marks : 60

N. B. :

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Draw neat and labelled diagrams **WHEREVER** necessary.
 - 4) Assume suitable data, if necessary.
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- Q. 1**
- a) Explain in brief various allowances provided on patterns. **(05)**
 - b) What do you understand by core, core print and core box? Explain in short types of core boxes. **(05)**

OR

- a) Write the procedure for permeability test for moulding sand. **(05)**
- b) What is pattern, mould and casting? Draw only sketch of gating system and show the elements on it. **(05)**

- Q. 2**
- a) State the principle of centrifugal casting and state its advantages and limitations. **(05)**
 - b) Sketch a cupola and label the essential parts. Write different zones in cupola. **(05)**

OR

- a) Discuss various types of defects in sand casting. **(05)**
- b) Describe hot chamber die casting process. State the advantages. **(05)**

- Q. 3**
- a) Write types of rolling mills? Compare hot working and cold working process **(05)**
 - b) Explain 'Rotary swaging' process and state its applications. **(05)**

OR

- a) Explain with neat sketch of wire drawing method. **(05)**
- b) List different cold working process along with their application and example. **(05)**

- Q. 4**
- a) Describe with neat sketches nibbling, punching, Lancing, Notching and blanking operations. **(05)**
 - b) Compare hydraulic presses with mechanical presses. **(05)**

OR

- a) Sketch a blanking die and label it properly. Write the function of each part. **(05)**
- b) Explain with the help of neat sketch a 'Deep drawing process' and its applications. **(05)**

P. T. O.

Q. 5 List difference accessing used on lathe with the help of sketch, explain the working of all geared headstock of lathe stating its advantages and limitations. **(10)**

OR

Which are the work holding devices used in lathe. How multi start screw threads are cut on lathe? Calculate the change gears from L. H. threads of 2 mm pitch on a lathe having lead screw of 6 mm pitch. Available change gears are with 20 teeth to 120 teeth in steps of 5 teeth. **(10)**

Q. 6 Classify drilling machine. Sketch and describe various operating which can be performed on drilling machine. **(10)**

OR

What is climb milling? Explain dividing head attachment and calculate the indexing for 69 divisions using compound indexing available index places are: **(10)**

Plate No. 1 – 15, 16, 17, 18, 19, 20

Plate No. 2 – 21, 23, 27, 29, 31, 33

Plate No. 3 – 37, 39, 41, 43, 47, 49

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