No. of Printed Pages : 4 Roll No.

120333/030333
3rd Sem. / Auto
Subject : Automobile Engg. Drawing
Time : 3 Hrs .
M.M. : 100

## SECTION-A

Note: Draw proportionate, neat labelled sketch of two of the following $2 \times 10=20$
Q. 1 a) Slip Joint
b) Bush Bearing
c) Connecting rod

## SECTION-B

Note: Attempt any Two parts
$2 X 40=80$
Q. 2 The following data relates to a cam profile in which the follower moves with uniform

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acceleration and deceleration during ascent and SHM during descent.

Minimum radius of cam $=25 \mathrm{~mm}$

| Roller radius | $=7.5 \mathrm{~mm}$ |
| :--- | :--- |
| Lift | $=28 \mathrm{~mm}$ |
| Angle of ascent | $=60^{\circ}$ |
| Angle of decent | $=90^{\circ}$ |

Angle of dwell between ascent \& descent $=45^{\circ}$
speed of cam $=200 \mathrm{rpm}$.

Draw the profile of the cam.
Q. 3 Draw the profile of involutes teeth for a gear having 40 teeth \& module equal to 12 mm . Assume pressure angle to be $30^{\circ}$.
Q. 4 Draw the sectional top view and front view of the petrol engine connecting rod from the given

Fig. 1 \& part List.
Part List

| Part No. | Name | Material | Quantity |
| :---: | :--- | :--- | :---: |
| 1 | Rod | Forget steel | 1 |
| 2 | Cap | Forget steel | 1 |
| 3 | Bearing brass | Gun metail | 2 |
| 4 | Bearing bush | Phoplior broeze | 1 |
| 5 | Bolt | Medium carbon steel | 2 |
| 6 | Nut | Medium carbon steel | 2 |

