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18/B/C/S-3/4/E

036/227, 042/222, 043/223, 047/216, 052/225,
055/215, 056/218, 058/226, 065/228, 066/229,
067/221, 274

PAPER – III
FITTER / MACHINIST / MACHINIST GRINDER / MECHANIC AGRICULTURE
MACHINERY / MECHANIC MACHINE TOOL MAINTENANCE / MECHANIC
MOTOR VEHICLE / MECHANIC REFRIGERATION AND AIR-CONDITIONING /
OPERATOR ADVANCE MACHINE TOOL / TOOL & DIE MAKER (DIES &
MOULDS) / TOOL & DIE MAKER (PRESS TOOLS, JIGS & FIXTURES) / TURNER /
REFRACTORY TECHNICIAN
(ENGINEERING DRAWING)
SEMESTER – III

TIME: 4 Hrs.

MARKS : 75

Note: Attempt all question.

1. **Draw FREE hand sketches of any TWO of the following - (25)**
 - a) Sketch any TWO types of bolts, mentioning their applications
 - b) Sketch any TWO forms of nuts from the following, with proportion marked.
 - i) Flanged nut
 - ii) Cap nut
 - iii) Capstan nut
 - iv) Ring nut
 - c) i) Show how the roughness is indicated on the component for the situation where its surface to be given in machining allowance.
ii) Show the method of indicating surface roughness on same surface quality all over
 - d) Sketch Single tool post for lathe.
2. Sketch any ONE type of keys from the following, in two views as fitted in position between shaft and the mounting. Choose the diameter of the shaft as 30mm and hub diameter of the mounting as 60mm. (10)
 - i) Taper sunk key
 - ii) Woodruff key
 - iii) Hollow saddle key
3.
 - i) Draw double riveted zig zag lap joint (5)
 - ii) Draw double riveted double strap chain butt joint. (5)
4. Sketch the internal and external ISO metric thread profile of nominal size of 25mm and pitch of 3 mm. (15)
5. Sketch the views of two spur gears, a pinion and a gear in mesh. Indicate the required parameters. (15)
