Roll Number			

SET   A

INDIAN SCHOOL MUSCAT
FINAL TERM EXAMINATION
ENGINEERING GRAPHICS

CLASS: XII   Sub. Code: 046   Time Allotted: 3 Hrs

13.11.2018   Max. Marks: 70

General Instructions:

(i)   All dimensions are in millimetres.

(ii)   Missing and mismatching dimensions, if any, may be suitably assumed.

(iii)   Follow the SP: 46, 2003 revised codes. (with First angle method of projection)

(iv)   In no view of question 1, are hidden edges or lines required.

(v)   In question 4, hidden edges or lines are to be shown in views without section.

Q1   (a) Construct an isometric scale.   03

(b) Draw the isometric projection of frustum of hexagonal pyramid (base edge = 30mm, top edge   07
= 40mm, height=60mm) with one base edge parallel to V.P. and its axis perpendicular to the H.P.
Give all the dimensions and indicate the direction of viewing.

 (c) An upright cylinder (diameter = 30mm and height = 50mm) is placed centrally on the top   14
rectangular face of a pentagonal prism (base side = 40mm and axis = 70mm). The prism is resting
on one of its face edges on H.P. with axis perpendicular to V.P. Draw the isometric projection of
this combination of solids. Give the dimensions and indicate the direction of viewing

Q2   a) Draw to scale 1:1, the front view, top view and left side view of a J – Bolt of size M20, keeping   08
the axis perpendicular to H.P. Give standard dimensions.

(b) Sketch freehand the front view and top view of a Hexagonal socket head screw of size M25,   05
keeping its axis vertical. Give standard dimensions.

Q3   Answer the following Multiple Choice Questions. Print the correct choice on your drawing sheet   05

 (i) What is the thread angle in degrees of a Metric thread?

    (a) 30°   (b) 45°   (c) 60°   (d) 90°

(ii) A circle drawn in isometric projection appears as?

    (a) Circle   (b) Round   (c) Ellipse   (d) Spherical

(iii) Section lines are generally inclined with the base, at an angle of?

    (a) 0⁰   (b) 45⁰   (c) 50⁰   (d) 90⁰
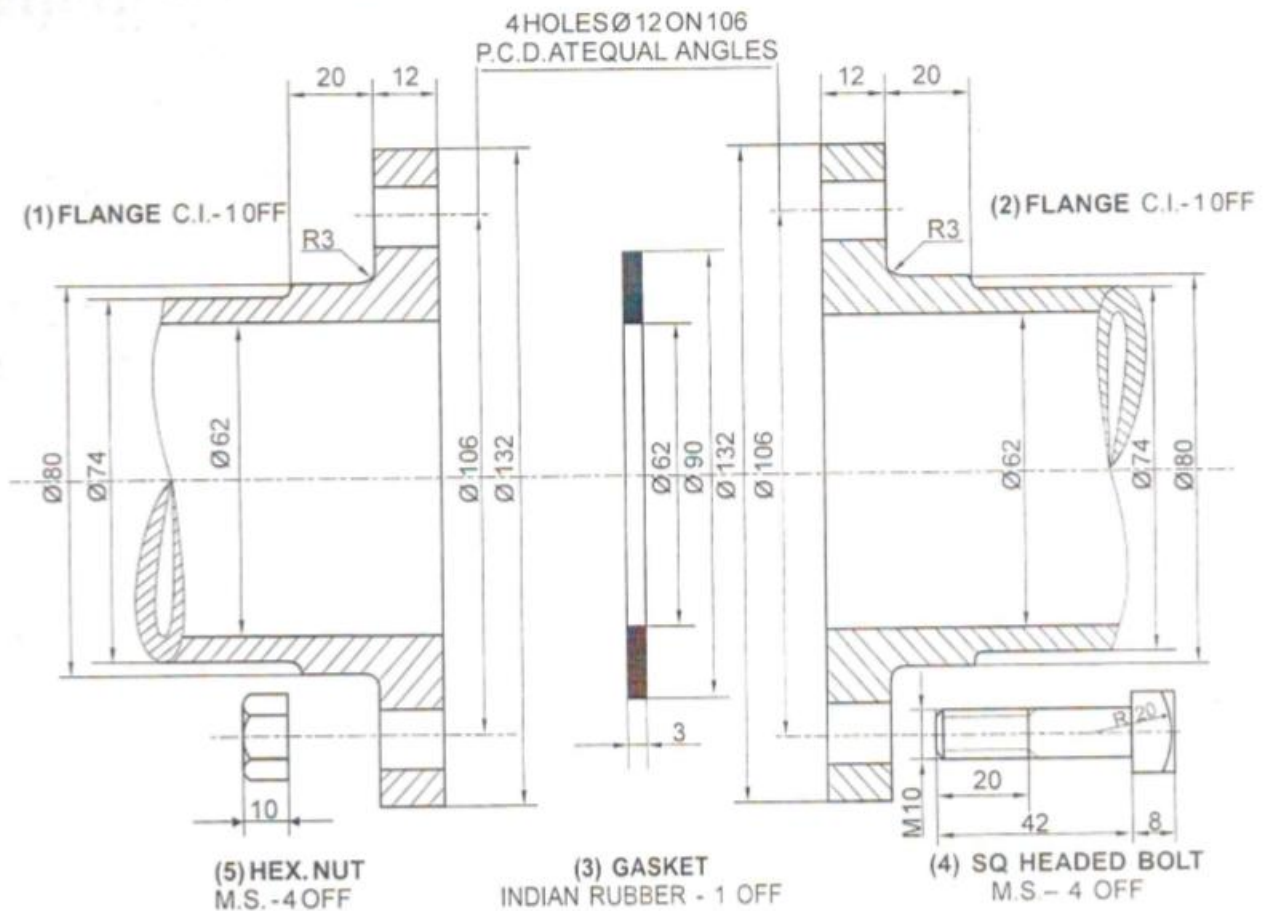
(iv) What is the Turn Buckle also known as?

    (a) Gib and cotter joint   (b) Sleeve and cotter joint
    (c) Tie rod joint   (d) Stud

(v) M in dimension Stud of "M20 "stands for

    (a) Metric Thread Profile   (b) Square Thread Profile
    (b) Knuckle Thread Profile   (d) B.S.W. Thread Profile

Q4   Figure – 1 shows the drawing details of different parts of a **FLANGED PIPE JOINT** for joining two square rods. Assemble all the parts correctly and draw the following views to scale 1:1

(i)	Front view, upper half in section.	14
(ii)	Left side view	08
(iii)	Give 6 important dimensions, title, projection symbol and scale.	06

DETAILS OF A FLANGED PIPE JOINT

End of the Question Paper