

Roll Number		
-------------	--	--

Code Number 46/1



INDIAN SCHOOL MUSCAT  
FIRST PRELIMINARY EXAMINATION 2017  
ENGINEERING GRAPHICS

CLASS: XII  
14.12.2017

Sub. Code: 046

Time Allotted: 3 Hrs  
Max. Marks: 70

**General Instructions:**

1. Attempt all questions.
2. Use both the sides of the drawing sheet if necessary.
3. All dimensions are in millimeters.
4. Missing and mismatching dimensions if any should be assumed suitably.
5. Follow SP: 46 2003 revised codes. (With first angle projection method).
6. In no view of question 2, are hidden edges or lines required.
7. In question 4, hidden lines or edges are to be shown in the views without section.
8. Number your answer figures as per your question.

- 1
- a. Draw an isometric scale 03
- b. A triangular prism (base side =40 mm and height = 68 mm), rests on HP on one of its longer edges and its axis being parallel to both VP and HP. Draw its isometric projection to isometric scale. Indicate the direction of view and mark all dimensions. 07
- c. A square prism (side = 33 mm and height = 58 mm) is resting on HP on one of its rectangular faces with the axis perpendicular to VP and one of the base side perpendicular to HP. A frustum of a pentagonal pyramid (base = 48 mm ,top = 25 mm and height = 74 mm ) rests centrally on the rectangular face of the square prism with its axis perpendicular to HP and one of the sides of the pentagon parallel to and nearer to VP. Draw the isometric projection to isometric scale of the combination solids. Indicate the direction of view and mark all dimensions. 14
- 2
- a. Draw to scale 1:1 the standard profile of a metric thread (internal), taking enlarged pitch as 60 mm. Give standard dimensions 08
- b. Sketch freehand the front view and top view of a snap head rivet, taking diameter as 25 mm, keeping its axis vertical. Give standard dimensions. 05

3 Answer the following multiple choice questions and print the correct choice on your sheet.

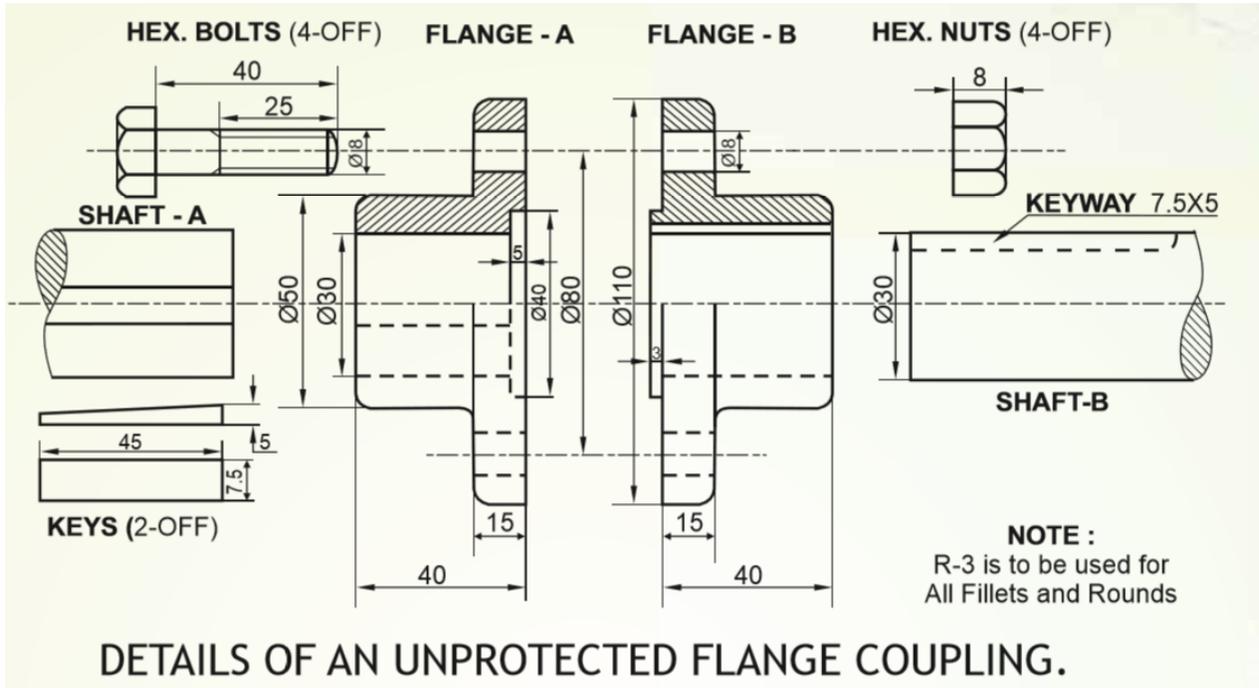
05

1. The outer cylindrical surface of the pulley used to hold the belt is called .....
  - a. Hub
  - b. Rim
  - c. Web
  - d. Crown
  
2. The flanges have a flared and flattened rim to cover the protruding nuts and bolts called .....
  - a. Chamfer
  - b. Crown
  - c. Hub
  - d. Shroud
  
3. .... serves as a joining device between the ropes and the posts or rods.
  - a. Sleeve and cotter joint
  - b. Gib and cotter joint
  - c. Tie rod joint
  - d. Pipe joint
  
4. The advantage of woodruff key is that.....
  - a. It can be easily adjusted in the recess
  - b. It looks like a segment of a circular disc.
  - c. It provides axial movement between the mating piece.
  - d. None of the above
  
5. .... is an operating element of a temporary fastening.
  - a. Screw threads
  - b. Recess
  - c. Collar
  - d. None of the above

4 The figure shows details of parts of an **Unprotected Flange Coupling**. Assemble the parts together and draw the following view to scale 1:1

28

- a. Elevation, upper half in section.
  - b. Right end side view.
  - c.
- Print title and scale .Draw projection symbol. Mark 8 important dimensions.



**End of the Question Paper**