



Indian School Al Wadi Al Kabir

Unit test (2025-2026)

Class: XI
Date: 22/05/2025

Subject: Engineering Graphics (046)
SET-1

Max. marks: 30
Time: 1 hour

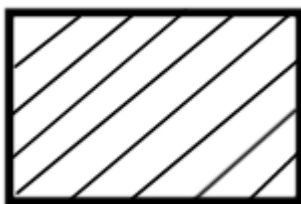
General Instructions:

- (i) Attempt all the questions.
- (ii) Use both sides of the drawing sheet, if necessary.
- (iii) All dimensions are in millimeters.
- (iv) Missing and mismatching dimensions, if any, may be suitably assumed.
- (v) Follow the SP: 46 – 2003 revised codes. (with first angle method of projection)

(10 × 1 = 10)

SECTION – A

1. In metric system, the standard-length measure is -----.
 - (a) centimeters
 - (b) meters
 - (c) millimeters
 - (d) decimeters
2. In engineering graphics many machine parts such as bearings, pulleys and gears are ----- in shape.
 - (a) Circular
 - (b) Triangular
 - (c) Hexagonal
 - (d) Pentagonal
3. According to order of priority, which type of line has precedence over all other types of lines?
 - (a) Center line
 - (b) Continuous thin line
 - (c) Continuous thick line
 - (d) Hidden line
4. Identify the type of line shown in the figure.



- (a) Dashed line
- (b) Axis line
- (c) Hatching line
- (d) Dimension line

5. Which system of placing dimension is used for small drawings?

- (a) Unidirectional system
- (b) Aligned system
- (c) Non-aligned system
- (d) Multidirectional system

6. Pick the odd one out from the following.

- (a) Hexagon
- (b) Square
- (c) Rectangle
- (d) Rhombus

7. Match the LIST I with LIST II

LIST I – TYPES OF LINES -DESCRIPTION	LIST II – GENERAL APPLICATIONS
1. Cutting plane	i) Axis line
2. Dashed line	ii) Dimension line
3. Chain thin line	iii) Section of objects
4. Continuous thin line	iv) Hidden edges

- (a) 1-iii, 2-iv, 3-i, 4-ii
- (b) 1-i, 2-iii, 3-ii, 4-iv
- (c) 1-iv, 2-iii, 3-ii, 4-i
- (d) 1-ii, 2-i, 3-iv, 4-iii

Q8. to 10: Read the following paragraph and answer the questions given below.

You are working in mechanical based company and you were asked to design a gear wheel which is circular in shape and need to determine the length around the wheel.



8. What formula is used to calculate the circumference of a circle?
- (a) Circumference = $\pi \times \text{Diameter}$
 - (b) Circumference = $\pi \times \text{Radius}$
 - (c) Circumference = $\pi \times 3R$
 - (d) Circumference = $\pi \times 4R$
9. If a gear has a diameter of 20 cm, what is its circumference? (approx., taking $\pi \approx 3.1416$)
- (a) 82.63 cm
 - (b) 42.53 cm
 - (c) 62.83 cm
 - (d) 72.83 cm
10. -----are two or more circles that share the same center but have different radii.
- (a) Eccentric circles
 - (b) Concentric circles
 - (c) Artic circles
 - (d) Congruent circles

SECTION B

(2 × 2 = 4)

11. Construct an angle CAB of 30 degree.
12. Draw a circle passing through three non-collinear points A, B and C.
- (2 × 3 = 6)**
13. Divide a straight-line AB in the ratio 3:5:2.
14. Construct a rhombus PQRS with diagonals PR= 46 mm and QS = 60 mm.
- (2 × 5 = 10)**
15. Construct a regular hexagon with base AB = 30 mm using protractor, now inscribe a circle in it.
16. Construct a regular pentagon of 40 mm using compassess.