

PAPER – II
DRAUGHTSMAN (CIVIL) / DRAUGHTSMAN (MECHANICAL) / FITTER /
MACHINIST / MACHINIST GRINDER / MECHANIC AGRICULTURE MACHINERY /
MECHANIC MACHINE TOOL MAINTENANCE / MECHANIC MOTOR VEHICLE /
MECHANIC RAC / OPERATOR ADVANCED MACHINE TOOL / TOOL & DIE
MAKER (DIES & MOULDS) / TOOL & DIE MAKER (PRESS TOOLS, JIGS &
FIXTURES) / TURNER / REFRACTORY TECHNICIAN
(WORKSHOP CALCULATION & SCIENCE)
SEMESTER – III

TIME: 3 Hrs.

MARKS : 75

Note: Attempt all the question.**All questions carry equal marks.****This paper carries negative marking. 25% marks will be deducted for each wrong answer.****Choose the correct answer:**

1. Velocity, Density and Acceleration are known as -

a) Fundamental quantities	c) Similitude
b) Derived quantities	d) SI unit

2. When a sheet size 10 m x 5 m is cut into small pieces of size 25 cm x 20 cm, how many number of pieces will be cut?

a) 800 pieces	c) 725 pieces
b) 825 pieces	d) 1000 pieces

3. $\sin(90 + \theta) =$ _____

a) $\cos \theta$	c) $\sin \theta$
b) $\tan \theta$	d) $\sec \theta$

4. The unit of work is _____

a) Joule	c) Newton
b) Watt	d) Pascal

5. 36 inches is equal to _____ cm

a) 80.5	c) 101.88
b) 91.44	d) 90

6. 3.745×5.87 is _____

a) 21.98	c) 18.29
b) 29.81	d) 19.82

7. $44 - [33 - \{44(33 - 44 - 33)\}]$ is equal to
a) 1858
b) 1947
c) 2000
d) 1900
8. What percentage of 40 is 10?
a) 10
b) 25
c) 80
d) 100
9. Poisson's ratio is ____
a) $1/m$
b) m
c) k
d) $1/k$
10. Circumference of a circle is measured through ____
a) πR^2
b) $2R$
c) $2\pi R$
d) $\pi R^2/2$
11. In a right angled triangle ABC, the hypotenuse (AC) is equal to
a) $\sqrt{BC^2 + AC^2}$
b) $\sqrt{AB^2 + BA^2}$
c) $\sqrt{CB^2 + BC^2}$
d) $\sqrt{AB^2 + BC^2}$
12. $5m^2 =$ _____ cm^2
a) 50000
b) 40000
c) 5000
d) 4000
13. $37^\circ C =$ _____ F
a) 98.6
b) 78
c) 87
d) 104
14. 10 kW = _____ horse power
a) 13.41
b) 1.341
c) 768
d) 1000
15. $78000 \text{ kg/m}^3 =$ _____ kN/m^3
a) 780000
b) 60000
c) 7800
d) 6000
16. What is the density of an object with a volume of 15 mL and a mass of 42 grams?
a) 0.352 g/mL
b) 2.80 g/mL
c) 630 g/mL
d) None of these

Contd...3/-

31/217, 32/224, 36/227, 42/222,
43/223, 47/216, 52/225, 55/215,
56/218, 58/226, 65/228, 66/229,
67/221, 274

17. Area of a circle is measured through _____
a) πR^2
b) $2R$
c) $2\pi R$
d) $\pi R^2/2$
18. What is the correct value of $2 \times \pi \times \frac{1}{22}$?
a) $2/7$
b) $7/2$
c) $22/7$
d) $7/22$
19. What is the appropriate SI unit for distance?
a) Centimeters
b) Inches
c) Meters
d) Kilometres
20. One gallon is equal to _____ litres
a) 3.785
b) 3
c) 4
d) 5.5
21. 110°F can be written as _____ $^\circ\text{C}$
a) 37
b) 40
c) 43.33
d) 27
22. How much work is done by an applied force to lift a 15-Newton block 3.0 meters vertically at a constant speed?
a) 45 joules
b) 20 joules
c) 90 joules
d) 22.5 joules
23. Area of a triangle is given by
a) $(B \times H)/2$
b) $B \times H$
c) $2BH$
d) B/H
24. What is the correct value of π ?
a) $22/7$
b) $7/22$
c) 3.4
d) $3/4$
25. The area of an equilateral triangle of side 8mm is equal to
a) 27.7mm^2
b) 27.7cm^2
c) 2.7cm^2
d) 88mm^2
