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

D

DK

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
   b) Derived quantities
   c) Similitude
   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
   b) 825 pieces
   c) 725 pieces
   d) 1000 pieces

3. Sin (90 + θ) = _____
   a) Cos θ
   b) Tan θ
   c) Sin θ
   d) Sec θ

4. The unit of work is _____
   a) Joule
   b) Watt
   c) Newton
   d) Pascal

5. 36 inches is equal to _____ cm
   a) 80.5
   b) 91.44
   c) 101.88
   d) 90

6. 3.745 x 5.87 is _____
   a) 21.98
   b) 29.81
   c) 18.29
   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°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 \ 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

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. 110^0 F can be written as _____ $^\circ$ 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 x H)/2
   b) B x H
   c) 2BH
   d) B/H

24. What is the correct value of π?
   a) 22/7
   b) 7/22
   c) 3.4
   d) ¼

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) $88mm^2$

****