

**PAPER – II**  
**(WORKSHOP CALCULATION & SCIENCE AND ENGINEERING DRAWING)**  
**FOR THE TRADES WITH MINIMUM QUALIFICATION 10<sup>TH</sup> PASS**  
**SEMESTER – I**

TIME: 3 HRS.

MARKS: 150

**Note: This paper contains two parts – Part A & Part B.**  
**Attempt all the questions. All questions carry equal marks.**  
**This paper carries negative marking. 25 % marks will be deducted for each wrong answer.**

**PART – A (WORKSHOP CALCULATION & SCIENCE) (MARKS: 75)**

**Choose the correct answer :-**

1. 1000 liters is equivalent to \_\_\_\_\_.  
 a) 219.97 gallons      b) 200 gallons      c) 250 gallons      d) None of these
2. 52.5 lbs equivalent to \_\_\_\_\_.  
 a) 23.814 kg      b) 26.25 kg      c) 15.75 kg      d) 115.5 kg
3. The value of "X" in the following ratio  $X : 4 = 9 : 6$  is \_\_\_\_\_.  
 a) 2.66      b) 13.5      c) 6      d) 2.166
4. If the area of a square plot is  $2304 \text{ m}^2$ , then the side of the square is \_\_\_\_\_.  
 a) 45 meters      b) 48 meters      c) 47.9      d) 49.02
5. A force of one kg is used to do the 10 kg meter work, then the distance covered is \_\_\_\_\_.  
 a) 1 meter      b) 10 meters      c) 0.1 meters      d) None of these
6. 25 square feet is equivalent to \_\_\_\_\_.  
 a) 2.3225 square meter      b) 2.2323 square meter  
 c) 2.2525 square meter      d) None of these
7.  $0.1 \times 0.01 =$  \_\_\_\_\_.  
 a) 0.1      b) 0.01      c) 0.001      d) 0.0001
8. The perimeter of a rectangle is 320 meters, its sides are in the ratio of 5:3 then its area is \_\_\_\_\_.  
 a) 6000 Sq meters      b) 3000 Sq meters      c) 1200Sq meters      d) 24000 Sq meters
9. What will be the number of zeros in the square of the number 400?  
 a) 2      b) 3      c) 4      d) None of these
10. The unit of energy in SI system is \_\_\_\_\_.  
 a) Erg      b) Calorie      c) Joule      d) Electron volt

11. The weight of cube material of 14 cm side and whose density is 7.8 gms/cc is \_\_\_\_\_.  
a) 21.4 kg                      b) 351 grams                      c) 25.14 kg                      d) 109.2 kg
12. Ram scored 553 marks out of 700 and Deepu score 486 marks out of 600, who performed better \_\_\_\_\_.  
a) Ram                      b) Deepu                      c) Both performed equal                      d) None of these
13. In a white metal there are 20 parts tin, 3 parts copper and 2 parts of antimony their percentages are \_\_\_\_\_.  
a) 80%, 20% and 20%                      b) 60%, 20% and 20%  
c) 80%, 12% and 8%                      d) 80%, 10% and 10%
14. The ratio of distance covered to the time is termed as \_\_\_\_\_.  
a) Velocity                      b) Speed                      c) Acceleration                      d) Retardation
15. If a mass of 4kg is dropped from a height of 100 meters, what is its velocity when it touches the ground \_\_\_\_\_.  
a) 44.27 meters/sec                      b) 31.30 meters/sec  
c) 93.91 meters/sec                      d) 125.21 meters/sec
16. Simplify  $(-4)/5 \times 3/7 \times 15/16 \times (-14)/9$  is equal to \_\_\_\_\_.  
a)  $1/2$                       b)  $14/35$                       c)  $45/80$                       d)  $-1/2$
17. The length, breadth and the height of the petrol tank are in the proportion of 8 : 5 : 2 and if the height is 25 cms then its volume is \_\_\_\_\_.  
a) 156250 cc                      b) 12500 cc                      c) 1000 cc                      d) None of these
18. If the weight of a substance is 150 grams and its density is 6, then its volume is \_\_\_\_\_.  
a) 900 cc                      b) 25 cc                      c) 40 cc                      d) 0.04 cc
19. An automobile factory produces 480 vehicles per month and if the out put is increased by 15%, what is the increased out put?  
a) 528 nos.                      b) 552 nos.                      c) 540 nos.                      d) 555 nos.
20. Normal temperature of the human body is 98.4°F. If it is expressed in °C, it is equivalent to \_\_\_\_\_.  
a) 38°C                      b) 32°C                      c) 36.8°C                      d) 40°C
21. A gun metal weighing 5 kg consists of 20 parts of copper, 3 parts of tin and 2 parts of zinc, then the copper and zinc contents are \_\_\_\_\_.  
a) 4 kg of copper and 0.4 kg of zinc                      b) 4 kg of copper and 0.6 kg of zinc  
c) 4 kg of copper and 0.5 kg of zinc                      d) 4 kg of copper and 0.7 kg of zinc
22. The square root of 0.09 is \_\_\_\_\_.  
a) 0.03                      b) 0.3                      c) 0.003                      d) 3.0

23. Which number one among the following four numbers is to be subtracted from 1989 to get a perfect square ?  
a) 53                      b) 36                      c) 140                      d) None of these
24. A piece of alloy weighing 80 grams consists of 60 grams copper the remaining is zinc, then the ratio of copper to zinc is \_\_\_\_\_.  
a) 3 : 4                      b) 1 : 4                      c) 3 : 1                      d) 2 : 3
25. Which group of fractions is in descending order?  
a)  $\frac{2}{3}$ ,  $\frac{3}{4}$ ,  $\frac{5}{8}$ ,  $\frac{8}{9}$                       b)  $\frac{5}{8}$ ,  $\frac{2}{3}$ ,  $\frac{3}{4}$ ,  $\frac{7}{8}$   
c)  $\frac{2}{3}$ ,  $\frac{3}{4}$ ,  $\frac{5}{6}$ ,  $\frac{5}{8}$                       d)  $\frac{5}{6}$ ,  $\frac{3}{4}$ ,  $\frac{2}{3}$ ,  $\frac{5}{8}$

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