WORKSHOP SCIENCE AND CALCULATION

SCVT PATTERN EXAMINATION JUNE 2017

	NOTE: Attempt all questions.	
Time: 3 hours		Total marks:75

PART-A

1. The S.I. unit of force is..........;.........

(a) Meter per second (b) Joule (c) Radian (d) Newton

2. One radian is equal to.............degree.

(a) 90 (b) 57.3 (c) 57.8 (d) 59

3. 32 degree Fahrenheit is equal to.............degree centigrade?

(a) 88.6 (b) 89.6 (c) 87.6 (d) 86.6

4. 1°12′30″ is equal to.............second.

(a)4530 (b) 5430 (c) 4305 (d) 4350

5. Symbol of specific heat is............. .

(a) j/kgk (b) kg/m³ (c)m/s (d)J

6. Generally, bearing bushes are made of

(a) Copper (b) brass (c) white metal (d) gun metal

7. The filaments of a lamp bulb is made of

(a) Nickel (b) Chromium (c) Tungsten (d) Tin

8. Monel metal contains

(a) Ni & Al (b) Ni & Cu 9c0 Ni & Cr (d) Ni & Zn

9. Carbon percentage in H.S.S tool is

(a) 0.75 to 1.00 (b) 1.00 to 2.00 (c) 0.60 to 0.75 (d) 1.75 to 2.25

10. German silver contains ....percent of copper,

(a) 25 (b) 35 (c) 45 (d) 50

11. Which one of the following is the proper fraction?

(a)5/3 (b) 3/5 (c) 5/4 (d) 9/4

12. Place the missing number $\frac{5}{36} = \frac{1}{12} \times$ ... ...

(a)5/3 (b)3/5 (c)4/5 (d)5/4

13. If $(y2 - 64)/16 = 0$,value of y is

(a) 10 (b) 12 (c) 8 (d) 4

14. Which fraction is bigger?

(a) 5/6 (b) 5/12 (c) 5/7 (d) 5/18

15. A gun metal piece consists of 22 parts of copper, 2.5 parts of tin and 0.5 parts of zinc. Find the %age of each metal in the alloy?

(a) 88%Cu, 10%Sn, 2%Zn (b) 82%Cu, 12%Sn, 2%Zn (c) 82%Cu, 10%Sn,4%Zn (d)None of these

16. A piece of metal weigh 320gms in air and 266gms in water. What is the volume and specific gravity of the metal?

(a) 54 c.c, 5.826 (b) 53c.c, 5.926 (c) 54c.c, 5.926 (d) none of these

17. The mass of a substance in air is 22.75gms, while its mass when immersed in water is 19.25gms.Findthe specific gravity of the substance.

(a) 5.6 (b) 6.5 (c) 7.5 (d) 5.7

18. The weight of a ball is 1.875kg and volume is 250c.c.Calculate the density of the material.

(a) 5.7gm/c.c (b) 6.7gm/c.c (c) 7.5gm/c.c (d)8.5gm/c.c

19. A pipe of length 2 meter has an internal diameter of 40mm and thickness of 4.5mm.If the density of the metal is 8.5gm/c.c .Find the weight of the pipe in kg.

(a) 10.69 (b) 11.69 (c) 10.96 (d) 11.96

20.Calculate the mass of the washer 56mm external diameter , 28mm internal diameter if it is 6mm thick.The density of the material is 0.0089gm/c.c

(a) 89.6832 (b)98.8632 (c) 98.6832 (d) 89.6832

21. Multiply 2.5 by 1.25

(a) 31.25 (b) 0.3125 (c) 312.5 (d) 3.125

22. Calculate the square root of 0.09

(a) 0.3 (b) 0.03 (c) 3 (d) 0.003

23. Area of square is 3136 sq-mm.Find out the side of the square.

(a) 54mm (b) 56mm (c) 64mm (d) 66mm

24.Area of cross-section A=808.5sq-cm.Inner diameter d=140cm.Find out the outer diameter D in mm.

(a) 340mm (b) 360mm (c) 350mm (d) 320mm

25. An iron piece weighs 160kgf in air and 133kgf in water when it is fully immersed. Determine the volume and specific gravity of the iron piece.

(a) 27cubic cm,4.95 (b) 27 cubic cm,5.95 (c) 24 cubic cm,4.95 (d) 24 cubic cm,5.95