## (PAPER – II) DRAUGHTSMAN (CIVIL) (WORKSHOP CALCULATION & SCIENCE) SEMESTER-I

TIME: 1:30 Hrs.

FT-F-38 DGE&T (WSED-E/H)-EC2

MARKS: 75

Note:- This paper contains Part A Only.
Attempt all the questions.
All questions carry equal marks.

## PART-A (WORKSHOP CALCULATION & SCIENCE) (75)

## Choose the correct answer -

0.03125 is equal to -

	a) 1/4	b) 1/8	c) 1/16	d) 1/32		
2.	2.54 inch is equal to –					
	a) 64mm	b) 64.516 mm	c) 65mm	d) 66mm		
3.	1 Tonne (British) is equal to –					
	a) 991 Kg	b) 1000 kg	c) 1010 kg	d) 1016 kg		
4.	50 kg is equal to –					
		b) 110 pound		d) 125 pound		
5.	If 100 cm <sup>2</sup> inch is multiplied by 1mm, it will be the –					
	a) 100 cm <sup>3</sup>	b) 10 cm <sup>3</sup>	c) 1 cm <sup>3</sup>	d) 1000 cm		
6.	If length (l) and breadth (b) of a rectangle are given, its diagonal will be -					
	a) $\sqrt{(1^2+b^2)}$	b) 2(l+b)	c) 21+b	d) 1+2b		
7.	If $\sqrt{3}$ is multiplied by the side, it will be the –					
	a) Diagonal of square		b) Volume of cube	b) Volume of cube		
	c) Diagonal of cube		d) Height of equilateral triangle			
8.	If $ax^2 + bx + c = 0$ ; then x is equal to –					
	a) $-b+\sqrt{b^2-4ac}$	b) $-b-\sqrt{b^2-4ac}$	c) $-b\pm\sqrt{b^2-4ac}$	d) $-c\pm\sqrt{b^2-4a}$		
	2a	2a	2a	2a		
9.	In a triangle when two adjacent sides a & b and their included angle 'C' are given,					
	then its area will be -					
	a) 1 axbxsinC	b) 1_axbxcosC	c) 1 axbxtanC	d) axcxsinC		
	2	2	2			
10.	If the radius (r) of a half-circle is given 'r' its perimeter will be -					
	a) πr	b) 2πr	c) r(π+2)	d) π r/2		
11.	If initial velocity 'u', acceleration 'f' and time taken 't' of a body are given; its final velocity (v) will be -					
		b) $v = ut + \frac{1}{2} ft^2$	c) v = u + ft	$d) v = u^2 + 2f$		

12.	The height of a chimney is 'h' meter and the observer is located at a distance of 's' metre. Its angle of elevation $(\theta)$ will be –					
	a) $\theta = \tan^{-1}(s/h)$	b) $\theta = \tan^{-1}(h/s)$	c) $\theta = \sin^{-1}(s/h)$	100		
13.	If $x+y=1$ and $x-y=$	1, the value of x and y	will be	$d = \cos (s/n)$		
1	a) $x=0$ $y=1$	b) x=2, y=2	o) v=1 v=0	1) 2		
14.	If $x^2 - 4x + 4 = 0$ ; the	en value of vis	c) x-1, y-0	d) x=2, y=-1		
	a) 8 or -8	b) 7 or -7	c) 4	4) 2		
15.	If the diagonal (d) of	a cube is given its vol	ume will be –	d) 2		
	a) d/3 $\sqrt{3}$	b) $d^2/3\sqrt{3}$	c) $d^3 / 3 \sqrt{3}$	2) 4/-/2		
16.	When initial velocity	u(u) = 10m/sec final v	elocity $(y) = 0$ and time	(1) (1 / V) = 5 and		
	When initial velocity (u) = $10$ m/sec, final velocity (v) = 0 and time taken (t) = $5$ sec, Retardation will be –					
			c) 3m/sec <sup>2</sup>	d) 1m/2002		
17.	a) 1m/sec <sup>2</sup> b) 2m/sec <sup>2</sup> c) 3m/sec <sup>2</sup> d) 4m/sec <sup>2</sup> If the perimeter of a circle is 22 cm, its area will be –					
	a) 38 cm <sup>2</sup>	b) 38.5 cm <sup>2</sup>	c) 39 cm <sup>2</sup>	d) 10 cm <sup>2</sup>		
18.	a) $38 \text{ cm}^2$ b) $38.5 \text{ cm}^2$ c) $39 \text{ cm}^2$ d) $40 \text{ cm}^2$ If the height of an equilateral triangle is $\sqrt{3}/2$ cm, its area will be –					
	a) 43.3 cm <sup>2</sup>	b) 4.33 cm <sup>2</sup>	c) 433 cm <sup>2</sup>	d) 0 122 am²		
19.	a) 43.3 cm <sup>2</sup> b) 4.33 cm <sup>2</sup> c) 433 cm <sup>2</sup> d) 0.433 cm <sup>2</sup> Total surface area of a cube is 54 cm <sup>2</sup> , its volume will be –					
	a) 27 cm <sup>2</sup>	b) 28 cm <sup>2</sup>	c) 29 cm <sup>2</sup>	d) 30 am2		
20.	a) 27 cm <sup>2</sup> b) 28 cm <sup>2</sup> c) 29 cm <sup>2</sup> d) 30 cm <sup>2</sup> The length, breadth and height of a rectangular solid are 20 cm, 15 cm and 10 cm					
	respectively. It's whole surface will be –					
	a) 1100cm <sup>2</sup>	b) 1200 cm <sup>2</sup>	c) 1300 cm <sup>2</sup>	d) 1400 cm <sup>2</sup>		
21.	a) 1100cm <sup>2</sup> b) 1200 cm <sup>2</sup> c) 1300 cm <sup>2</sup> d) 1400 cm <sup>2</sup> If 20:40:: x:10; then x is –					
	a) 10		c) 2	4) 20		
22.	5 + 12 is equal to –		The bolling breef and	4) 20		
	12 7					
	a) 2.13095	b) 2.1308	c) 2.5673	d) 2.3342		
23.	If a ball of 100 gram is thrown from a height of 50 m, then it will strike to earth					
	with a force of –					
	a) 0.9 8 N	b) 2.0 N	c) 0.58 N	d) None of these		
24.	a) 0.9 8 N b) 2.0 N c) 0.58 N d) None of these If a falling body reaches the ground in 2 seconds, the location of the body will be at					
	the height (h) of (Take $g = 10 \text{ m/sec}^2$ ) –					
	a) 15 meter	b) 20 meter	c) 25 meter	tl) 30 meter		
25.	A cubical tank is filled with water. If each side of cube is 1 meter, weight of water					
	will be —					
	a) 800 kg	b) 900 kg	c) 1 tonne	d) 10 tonne		

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