

	Sanjay Ghodawat University, Kolhapur Established as State Private University under Govt. of Maharashtra. Act No XL, 2017		2018-19 EXM/P/09/00
	Year and Program B.Sc. II	School of Science	Physics
Course Code: PHS 203	Course Title: Physics workshop skill	Semester – Odd (III)	
Day and Date: <i>Thursdy 6 Dec 18</i>	End Semester Examination	Time: 30 minute Max Marks:15 <i>2:30 to 3:00</i>	
Seat No.:	PRN No.:	Student Sign:	
Invigilator Sign:	Examiner Sign:	Marks Obtained:	

Instructions:

- 1) All Questions are compulsory.
- 2) Mark \checkmark to the correct option. Do not circle.
- 3) More than one options marked will not be considered for assessment.
- 4) Rough calculations on paper are not allowed.
- 5) Use non-programmable calculator is allowed

Q.1	Sr. No	Select the correct alternative.	Marks (15)	Blooms level	CO
	1	To measure inner diameter of tube which of the following instrument is used..... A) Ruler B)Vernier caliper C) micrometer screw gauge D) tape	1	L1	203.1
	2	Least count of vernier caliper is..... A) 0.01cm B) 0.1cm C)1cm D) 0.001cm	1	L1,L5	203.1
	3	Least count of micrometer screw gauge is..... A) 0.001cm B) 0.01cm C) 1cm D) 1mm	1	L1,L5	203.1
	4	CGS unit of power is..... A) meter/second B) erg/sec C)joules/sec D) Joule	1	L1	203.1
	5	A sextant is a scientific instrument for measuring..... A) Rainfall B) radius of curvature C) height of building D) None of these	1	L1	203.1

6	In arc welding source of heat is..... A) electric arc B) power supply C) electrode D) none of these	1	L1	203.2
7	In ultrasonic welding metals are joined by using..... A) high current B) high frequency C) high resistance D) none of these	1	L1	203.2
8	In Butt joint the two parts are lie in..... A) same plane B) opposite plane C) plane at right angle D) none of these	1	L1	203.2
9	Forming process makes use of..... A) Stress B) Strain C) Current D) Voltage	1	L1	203.2
10	Moving pulleys are used in..... A) Elevators B) Bicycles C) cars D) none of these	1	L1	203.2
11	To measure A.C voltage using a multimeter the knob should be set at..... A) V with straight line B)V with wavy line C) A with straight line D) A with wavy line	1	L4	203.3
12	The voltage in circuit is always measured in A) series B) parallel C) both a&b D) none of these	1	L4	203.3
13	If two frequencies are equal then, pattern appears as A) straight line at 45° with horizontal B) straight line parallel to horizontal C) straight line parallel to vertical D) none of these	1	L1	203.3
14	Analog multimeter requires power supply..... A) occasionally B)True C) False D) none of these	1	L1	203.3
15	A multimeter is used to measure..... A) Resistance B) Current C) Voltage D) All of these	1	L1	203.3



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EXM/P/09/00

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Course Code: PHS 203

Day and Date:

Thursday 06 Dec 18

School of Science

Course Title: Physics workshop skill

End Semester Examination

Physics

Semester – Odd (III)

Time: 2 hrs 30 min

Max Marks: 85

3: w pmtb 5: 3op.

Instructions:

- 1) All questions are compulsory.
- 2) Figures to the right indicate full marks.
- 3) Neat diagrams must be drawn wherever necessary.
- 4) Use of logarithmic table and calculator are allowed.

Q.2

Answer the following questions

	Marks (30)	Blooms level	CO
a) Explain the stepwise procedure to measure thickness of the metal sheet with micrometer screw gauge. Discuss how errors could be eliminated from the total reading with neat diagram.	10	L5,L6	203.1
b) Write a note on breaking system.	10	L1	203.1
OR			
b) Discuss various parts of gear system.	10	L6	203.1
c) A micrometer screw gauge has 50 divisions on circular scale with a pitch of 0.5mm. While measuring thickness of metal sheet it is observed that 25 th division of circular scale coincides with main scale line and main scale reading is 0.5mm. What is the thickness of metal sheet?	5	L6	203.1
d) A student measures main scale of vernier caliper as 2.1cm, the coinciding division is 4 th division. If the least count of caliper is 0.01cm and negative error is 0.02 then calculate corrected reading?	5	L6	203.1

Q.3

Answer the following questions

	Marks (30)		CO
a) Explain cutting tools and lubrication oils.	10	L5	203.2
b) Discuss various welding processes.	10	L6	203.2

OR

	b)	Describe different defects in welding process and different types of welding joints.	10	L6	203.2
	c)	Explain the concept of workshop practice.	5	L5	203.2
	d)	Describe common materials used for manufacturing processes.	5	L5	203.2
			Marks	Blooms	CO
Q.4		Answer the following questions	(25)	level	
	a)	Explain the use of zener diode as voltage regulator and distinguish between regulated and unregulated power supply.	10	L5	203.3
	b)	Discuss limitations of multimeter.	5	L6	203.3
	c)	What is relay? Explain switch circuit using relay.	5	L1,L5	203.3
	d)	State advantages and disadvantages of soldering.	5	L1	203.3
		OR			
	d)	Describe the procedure to find out unknown frequency using lissajous pattern.	5	L5	203.3