

**2020/TDC (CBCS)/ODD/SEM/  
PHSSEC-301T/154**

**( 2 )**

**TDC (CBCS) Odd Semester Exam., 2020  
held in March, 2021**

**PHYSICS**

**( 3rd Semester )**

Course No. : PHSSEC-301T

**( Workshop Skill )**

*Full Marks : 50*

*Pass Marks : 20*

*Time : 3 hours*

*The figures in the margin indicate full marks  
for the questions*

**SECTION—A**

Answer any *fifteen* of the following questions :

1×15=15

1. What is meant by unit?
2. State the principle on which screw gauge works.
3. What is Vernier constant?

4. The SI unit of force is newton and that of CGS unit is dyne. Write the relation between newton and dyne.
5. What is the least count of a meter scale?
6. What is pitch of a screw gauge?
7. What is casting?
8. What is meant by foundry?
9. Name two hand-tools that are commonly used in foundry.
10. What is meant by forging?
11. What is welding?
12. What is pig iron?
13. What are machine tools?
14. What is reaming?
15. What is meant by chipping?
16. What is the necessity of filing?

( 3 )

17. Write the name of two cutting tools.
18. What is Bench vice?
19. What are the basic components of a CRO?
20. Mention two uses of oscilloscope.
21. What is filter circuit?
22. What is filter?
23. What is meant by relay?
24. What is timer circuit?
25. What is the mechanical advantage of a lever system?
26. What is gear ratio?
27. State, what is principle of moment.
28. What is fulcrum?
29. Mention the name of different types of braking system.
30. What is meant by brake?

10-21/83

( Turn Over )

( 4 )

SECTION—B

Answer *any five* questions

31. Explain back-lash error of a screw gauge. 2
32. Give a brief introduction about meter scale. 2
33. What are the advantages and disadvantages of welding joints? 2
34. What is cast iron? 2
35. What is the difference between drilling and boring? 2
36. What is shaper? Write the name of the principal parts of shapers. 1+1=2
37. Briefly explain about soldering. 2
38. Draw a circuit diagram of working of a transistor as a switch. 2
39. What is pulley? State the different types of pulley. 1+1=2
40. Briefly explain the working of a gear. 2

10-21/83

( Continued )

( 5 )

SECTION—C

Answer *any five* questions

41. Describe how you can measure the volume of a cylindrical body by using a slide caliper. 5
42. What is sextant? How can it be used to measure the height of a tower? 1+4=5
43. Explain what is machining. Describe some basic machining operations. 1+4=5
44. Describe the formation of steel and their classification. 2+3=5
45. What is lathe? Discuss the working principle of lathe. What are the different lathe operations? 1+3+1=5
46. What is Milling Machine? Briefly discuss about the working of Milling machines. Mention the name of a few types of Milling machines. 1+2+2=5
47. Discuss briefly about multimeter. Explain the uses of multimeter. 5

( 6 )

48. What is a regulated power supply? Describe its construction with a neat block diagram. 1+2+2=5
49. Explain the working of hydraulic brake system and discuss its advantages and disadvantages. 5
50. What is a lever? Discuss about the different classes of lever system with examples. 5

\*\*\*