

Paper 1 / SL / TZ2 / May 2019

1. A

2. C

3. D

4. A

5. B

6. C

7. D (revised)

To throw the tool away, the astronaut must have done some work on it, so the total KE has increased.

8. A

9. D

10. C

11. B

12. A

13. C

14. B

15. B

16. D (revised)

$n_{\text{glass}} \sin \theta_{\text{glass}} = n_{\text{liquid}} \sin \theta_{\text{liquid}} = n_{\text{air}} \sin \theta_{\text{air}}$ so the angle of refraction in air (or the fact that there is total internal reflection) does not depend on the intermediate layer.

17. D

18. B

19. A

20. D

21. B (revised)

Cause and effect are not clear in this question. Should have stated current carrying wire.

22. D

23. D

24. A

25. D

26. C

27. C

28. B

29. B

30. D