

TECHNICAL TEST — THEORY

ABRASIVE WHEELS

Answer all 35 questions in the spaces provided. Write clearly in ink.

Time guide: 45–60 minutes. Pass mark: 28 of 35 (80%). Questions marked [SC] are safety-critical and must be answered correctly.

1. What is an abrasive wheel?

2. Name THREE hazards associated with abrasive wheels.

3. What legislation governs the safe use of abrasive wheels?

4 [SC]. Who is permitted to mount an abrasive wheel onto a machine?

5. What information must be checked before selecting a wheel for a machine?

6 [SC]. Before mounting a new wheel, what visual checks must be made?

7 [SC]. Describe the 'ring test' and its purpose.

8. What components, in addition to the wheel, must be correctly fitted when mounting?

9. Why must flanges be of the correct size and condition?

10 [SC]. What is the purpose of the 'running-in' period after mounting a new wheel?

11 [SC]. Where should personnel stand during the running-in test and general use of an abrasive wheel?

12. What is the purpose of a guard on an abrasive wheel machine?

13 [SC]. On a bench or pedestal grinder, what is the maximum permitted gap between the work rest and the wheel?

14. Why must the work-rest gap on a bench/pedestal grinder be kept to the minimum (3 mm)?

15. Why should a straight (Type 1) grinding wheel not be used on its side unless it is designed for the purpose?

16. What checks must be made before starting work with an abrasive wheel machine each time it is used?

17 [SC]. What must be done to the machine before changing a wheel or adjusting the guard/work rest?

18. What eye/face protection is required when using an abrasive wheel?

19. Why can dust from abrasive wheel work (particularly on stone, concrete or masonry) be a serious health hazard?

20. When might gloves NOT be appropriate when using an abrasive wheel machine?

21. What fire precautions apply when using an abrasive wheel?

22 [SC]. What must be done if an abrasive wheel is found to be damaged, chipped or cracked?

23. Where and how should abrasive wheels be stored?

24. What action should be taken if an abrasive wheel bursts or a near miss occurs?

25. Name TWO types of abrasive wheel machine commonly found on site or in the workshop.

26 [SC]. What determines the maximum safe operating speed of an abrasive wheel?

27 [SC]. Why must an angle grinder disc guard never be removed?

28. What is 'kickback' on an angle grinder or cut-off saw and how can it be minimised?

29. What must be checked about the workpiece before cutting or grinding?

30. Why should an abrasive wheel not be forced into the work?

31. How often must abrasive wheel machines be inspected/maintained?

32. What training and assessment must an operator complete before being authorised to change wheels and use abrasive wheel machines unsupervised?

33. What must be recorded once an operator has been assessed as competent?

34. Why is noise a hazard associated with abrasive wheel work, and what control is required?

35. What is the purpose of a blotter (compressible washer) fitted between the wheel and the flange?

END OF TEST — hand this paper to the assessor.

Candidate name	Date	Site / employer
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