

# AN ROINN OIDEACHAIS

(Department of Education).

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## LEAVING CERTIFICATE EXAMINATION, 1944.

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### MATHEMATICS—Arithmetic.

MONDAY, 19th JUNE.—MORNING, 10 TO 12 NOON.

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Six questions may be answered.

Mathematical Tables may be obtained from the Superintendent.

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1. Find, to the nearest penny, the cost of 4 cwt. 1 qr. 17 lbs. at £5 14s. 3½d. per cwt.

[30 marks].

2. A farmer buys some stacks of hay for £594 10s. at the rate of £7 5s. per ton. He sells the hay at £7 15s. per ton but finds that 4 tons have got spoiled and for this portion of the hay he gets nothing. Find his profit per cent. correct to one decimal place.

[30 marks].

3. The depreciation in value of a motor-car is calculated as follows : on completing 5,000 miles (and every multiple of 5,000 miles) it loses 12½% of the value it had at the beginning of that 5,000 miles. If its value was £300 when new, find (a) the value when it has completed 30,000 miles ; (b) the mileage (to within 5,000) it has done when its value is £150.

[30 marks].

4. A person holds a Bill of Exchange for £1450 payable six months and hence. He gets the Bill discounted in a Bank at 4% per annum and invests the proceeds in a 10% Stock at 245. What will be his half-yearly dividend ?

[30 marks].

5. A cylindrical vessel 8 ft. high and the diameter of whose base is 4 ft., is filled with water. It is then placed standing in an empty cubical cistern which measures 5 feet each way on the inside. If the cylindrical vessel leaks at the rate of  $\frac{1}{4}$  c. ft. per hour, find (to the nearest hour) when the water will be at the same level outside and inside the cylinder.

[30 marks].

[Neglect the thickness of the cylinder].



