EXAMINATION FOR THE ENLISTMENT OF SOLDIERS IN THE ARMED FORCES OF MALTA

SAMPLE PAPER

MATHEMATICS

TIME: 1 HOUR

Instructions to candidates

- **This examination paper consists of THREE sections: A, B and C. Answer all 50 questions in these sections.**
- **Each question contains four possible answers, but only ONE is correct.**
- **Enter your answers on the Answer Sheet provided. Mark ONLY the correct answer by using a pencil.**

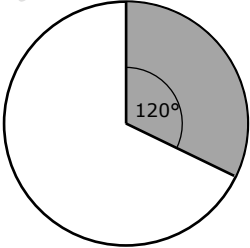   **e.g. If answer C is selected, fill in the appropriate circle as shown below.**

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- **Each question carries two (2) marks.**
- **Diagrams are NOT drawn to scale.**
- **The use of calculators is allowed.**

Section A

This Section contains twenty (20) questions (from 1 to 20). Answer ALL questions.

1	Fill in the missing terms on the sequence 98, 96, 94, _____, 90, _____ A) 96, … , 98 B) 92, … , 88 C) 93, … , 89 D) 93, … , 92
2	The sum of 273 and 437 is: A) 699 B) 700 C) 710 D) 709
3	Change 7046 grams into kilograms. A) 70.46 kg B) 7.406 kg C) 7.046 kg D) 704.6 kg
4	Simplify the ratio: 84:96 A) 28 : 26 B) 24 : 26 C) 8 : 7 D) 7 : 8
5	Change 3 years in months. A) 21 months B) 365 months C) 72 months D) 36 months
6	5.15 p.m. can be written as: A) half past five in the afternoon B) 17:15 C) quarter past five in the morning D) 15:15
7	The set of numbers arranged in order of size, starting with the smallest is: A) 70.77, 7.707, 7.007, 7.70, 7.77 B) 7.007, 7.70, 7.707, 7.77, 70.77 C) 7.007, 7.707, 7.70, 7.77, 70.77 D) 70.77, 7.77, 7.707, 7.70, 7.007
8	Work out: $\frac{1}{4}$ of €240 A) €60 B) €80 C) €40 D) €120

9	Express 0.45 as a fraction in its simplest form.			
	A) $\frac{9}{50}$	B) $\frac{9}{20}$	C) $\frac{2}{90}$	D) $\frac{45}{100}$

10	Express $\frac{7}{25}$ as a percentage.			
	A) 70%	B) 7.25%	C) 28%	D) 35%

11	In triangle ABC, $\hat{A} = \hat{B} = 40°$. Triangle ABC is:			
	A) equilateral	B) isosceles	C) right-angled	D) scalene

12	Ben sits for 7 examinations and scores the following marks: 64, 60, 28, 74, 62, 65, 74. Find the median mark.			
	A) 64	B) 74	C) 65	D) 64.5

13	What fraction of the shape is shaded?			
	A) $\frac{1}{12}$	B) $\frac{1}{5}$	C) $\frac{1}{3}$	D) $\frac{1}{6}$

14	A square has sides of length 5 cm. Calculate the area of the square.			
	A) 25 cm^2	B) 20 cm^2	C) 40 cm^2	D) 10 cm^2

15	Work out: $3 \times 6 - 2 \times 5$			
	A) 60	B) 8	C) 80	D) 35

16	A right-angled triangle has: A) three right angles B) two right angles C) one right angle D) at least one right angle

17	Which one of the following pairs of angles together form a straight line? A) 70° and 50° B) 120° and 60° C) 20° and 70° D) 85° and 65°

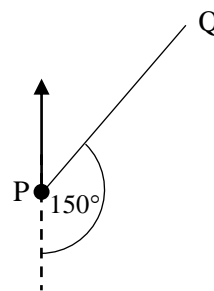| 18	The following are the ages of five athletes at a training session: 17 years, 14 years, 16 years, 23 years, 20 years. Calculate the range. A) 9 B) 18 C) 17 D) 16

19	The circumference of a circle, radius r, is calculated by using the formula: A) πr^2 B) πr^3 C) $2\pi r^2$ D) $2\pi r$

20	The bearing of Q from P is given by: A) 30° B) 150° C) 210° D) 50°

20 x 2 marks = **40 marks**

Section B

This Section contains twenty (20) questions (from 21 to 40). Answer ALL questions.

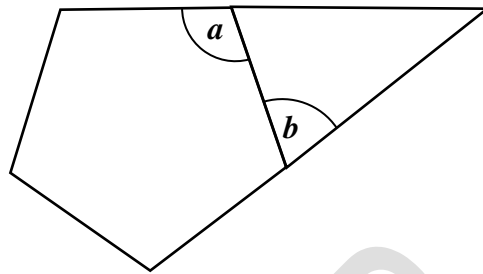|	
21	The value of $68 - 35 - (40 - 8 - 6)$ is: A) -7 B) 7 C) 59 D) 21
22	Calculate 20% of 320 m. A) 6.4 m B) 16 m C) 6400 m D) 64 m
23	The ratio 140 m **:** 4.2 km in its simplest form is: A) 7:201 B) 1:30 C) 1:3 D) 1:300
24	In quadrilateral PQRS, $\hat{P} = 60°$, $\hat{Q} = 35°$, $\hat{R} = 55°$. Find the value of $\hat{S}$. A) 210° B) 30° C) 90° D) 50°
25	The next two terms of the sequence $\frac{1}{2}, \frac{1}{4}, \frac{1}{8}, \underline{\quad}, \underline{\quad}$ are: A) $\frac{1}{16}, \frac{1}{32}$ B) $\frac{1}{10}, \frac{1}{12}$ C) $\frac{1}{12}, \frac{1}{14}$ D) $\frac{1}{16}, \frac{1}{18}$
26	One side of a hexagon is 8 cm long. Calculate the perimeter of the hexagon. A) 40 cm B) 64 cm C) 48 cm D) 32 cm
27	Work out: $\frac{9}{2} - \frac{5}{8}$ A) $\frac{13}{8}$ B) $\frac{9}{6}$ C) $3\frac{7}{8}$ D) $1\frac{1}{2}$
28	Work out: $\frac{22}{5} \times \frac{15}{44}$ A) $\frac{5}{2}$ B) $\frac{30}{11}$ C) $\frac{3}{2}$ D) $\frac{3}{11}$

29	Calculate the cost of $2\frac{1}{2}$ kg of pork at €11.50 per kg.
	A) €46.00 B) €23.00 C) €57.50 D) €28.75
30	Mark goes to sleep at 22:15 on Sunday. He sleeps exactly 7 hours and 25 minutes. At what time does he wake up on Monday?
	A) 5.40 a.m. B) 7.25 a.m. C) 9.40 a.m. D) 5.50 a.m.
31	Three packets of biscuits cost €6.90. Find the cost of one packet.
	A) €2.30 B) €3.15 C) €1.06 D) €3.30
32	A car travels at 75 km/h. Find the time taken to travel 150 km.
	A) 75 mins B) 2 hours C) 1.5 hours D) 30 mins
33	A watch costs 420 GBP (Great Britain Pound) in England. Taking 1 GBP = €1.22, calculate the cost of the watch in Euro.
	A) €34.43 B) €512.40 C) €344.26 D) €51.24
34	Karl can cycle at 12 km per hour. Express his cycling speed in metres per second.
	A) 3.3 m/s B) 200 m/s C) 20 m/s D) 33 m/s
35	Use your calculator to work out the value of $\dfrac{27.1 + 76.4}{2.3 \times 1.5}$.
	A) 103.5 B) 76.9 C) 45 D) 30

36	The diagram shows a regular pentagon and a triangle. Angle $a = 108°$. Find the value of angle b. A) 60° B) 108° C) 82° D) 72°

37 A rectangular field is 40 m long and 30 m wide.
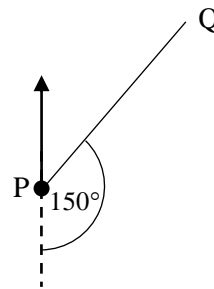Calculate the perimeter of the field.

A) 200 m   B) 140 m   C) 160 m   D) 1200 m

38 A model of a house is built on a scale of 1 cm to 3 m.
The model is 12 cm long.
Calculate the actual length of the house.

A) 36 m   B) 34 m   C) 45 m   D) 50 m

39 The bearing of P from Q is given by:
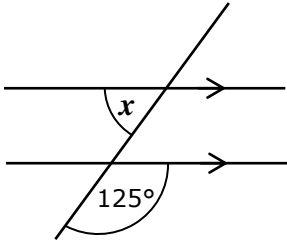
A) 30°

B) 150°

C) 210°

D) 50°

40 A screw weighs 5 g. An empty box weighs 0.06 kg. What is the total
weight, in kg, of a packet of screws containing 200 screws?

A) 1.6 kg   B) 1.06 kg   C) 16 kg   D) 1.006 kg
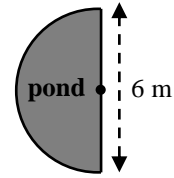
20 x 2 marks = **40 marks**

Section C

This Section contains twenty (10) questions (from 41 to 50). Answer ALL questions.

41	A drink is made by mixing juice and water in the ratio $2:7$. Anne uses 2.4 litres of juice to make the drink. How much water does she need to add? A) 28.8 litres B) 8400 ml C) 8 litres 40 ml D) 0.84 litre
42	The cost price of an electric guitar is €457. A music shop sells it at a profit of 35%. Calculate the selling price of the guitar. A) €616.95 B) €159.95 C) €297.05 D) €61.70
43	Last week, Claire worked 40 hours at €5.00 per hour and 6 hours overtime at €7.00 per hour. Calculate Claire's pay for last week. A) €62 B) €230 C) €322 D) €242
44	Find the value of angle x. A) 35° B) 125° C) 30° D) 55°
45	The mean weight of 6 women is 60 kg. The mean weight of 10 men is 92 kg. Calculate the mean weight of all 16 people. A) 9.5 kg B) 19 kg C) 80 kg D) 76 kg
46	Six workmen paint a house in 4 days. How many workmen are needed to paint the same house in 3 days? A) 8 workmen B) 2 workmen C) 18 workmen D) 12 workmen

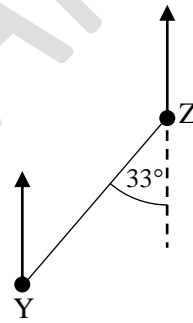| 47	A pond is in the shape of a semicircle of diameter 6 m. Calculate the area of the pond, correct to 2 d.p. A) 14.14 m² B) 18.85 m² C) 56.55 m² D) 113.10 m²

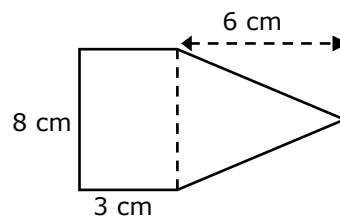| 48	Work out: $6\frac{3}{4} + 2\frac{5}{8}$ A) $8\frac{2}{3}$ B) $9\frac{3}{8}$ C) $9\frac{11}{8}$ D) $8\frac{8}{12}$

49	The bearing of Y from Z is given by: A) 213° B) 033° C) 147° D) 327°

50	The shape is made up of a rectangle and a triangle. Calculate the area of the shape. A) 46 cm² B) 48 cm² C) 72 cm² D) 36 cm²

10 x 2 marks = **20 marks**

TOTAL: 100 MARKS

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