EXAM PAPERS PRACTICE

Using a Calculator

Question Paper

Question 1

(a) Calculate $\sqrt{5.7} - 1.03^2$.

Write down all the numbers displayed on your calculator. [1]

(b) Write your answer to **part (a)** correct to 3 decimal places. [1]

Question 2

1 Use your calculator to work out $\sqrt{\frac{3}{4}} + 2^{-1}$.

Give your answer correct to 2 decimal places. [2]

Question 3

Calculate $\sqrt{120} + 3.8^2 - 25$. [1]

Question 4

Calculate $\sqrt{\frac{1}{2}(1-\cos 48°)}$. [1]

Question 5

Calculate.

(a) $2^3 - \sqrt{10+4^2}$ [1]

(b) $\frac{2\sqrt{3} \times \tan 70°}{3}$ [1]

Question 6

Find the cube root of 4913. [1]

Question 7

The thickness of one sheet of paper is 8×10^{-3} cm.

Work out the thickness of 250 sheets of paper.

[1]

Question 8

(a) Use your calculator to find the value of $7.5^{-0.4} \div \sqrt{57}$.
Write down your full calculator display.

[1]

(b) Write your answer to **part (a)** in standard form.

[1]

Question 9

(a) Use a calculator to work out $\frac{5^{0.4}-\sqrt{3}}{0.13-0.015}$.

Write down all the digits in your calculator display. [1]

(b) Write your answer to **part (a)** correct to 2 significant figures. [1]

Question 10

Use a calculator to find

(a) $\sqrt{5\frac{5}{24}}$, [1]

(b) $\frac{\cos 40°}{7}$. [1]

Question 11

$$m = \frac{1}{4}[3h^2 + 8ah + 3a^2]$$

Calculate the exact value of m when $h = 20$ and $a = -5$. [2]

Question 12

Calculate $3\sin 120° - 4(\sin 120°)^3$. [2]

Question 13

Calculate $81^{0.25} \div 4^{-2}$. [2]

Question 14

Use your calculator to find the value of $2^{\sqrt{3}}$.

Give your answer correct to 4 significant figures. [2]

Question 15

Use a calculator to work out the **exact** value of

$$1 + \frac{1}{5} + \left(\frac{1}{5}\right)^2 + \left(\frac{1}{5}\right)^3 + \left(\frac{1}{5}\right)^4.$$ [2]

Question 16

Calculate $\sqrt[3]{2.35^2 - 1.09^2}$.
Give your answer correct to 4 decimal places.

[2]

Question 17

Calculate the value of $\frac{1}{2}\sqrt{\frac{1}{2} + \frac{1}{2}\sqrt{\frac{1}{2}}}$

[1]

(a) writing down all the figures in your calculator answer,

(b) writing your answer correct to 4 significant figures. [1]

Question 18

Use your calculator to find the value of $\dfrac{(\cos 30^{\circ})^2 - (\sin 30^{\circ})^2}{2(\sin 120^{\circ})(\cos 120^{\circ})}$. [2]

Question 19

$\sin x^{\circ} = 0.86603$ and $0 \leqslant x \leqslant 180$.

Find the two values of x. [2]

Question 20

Use a calculator to find the value of $\sqrt{(5.4(5.4-4.8)(5.4-3.4)(5.4-2.6))}$.

(a) Write down all the figures in your calculator display. [1]

(b) Give your answer correct to 1 decimal place. [1]

Question 21

(a) Use your calculator to work out

$$\frac{1-(\tan 40^{\circ})^2}{2(\tan 40^{\circ})}.$$ [1]

(b) Write your answer to **part (a)** in standard form. [1]

Question 22

Use your calculator to work out

(a) $\sqrt{(7+6\times243^{0.2})}$, [1]

(b) $2-\tan30°\times\tan60°$. [1]

Question 23

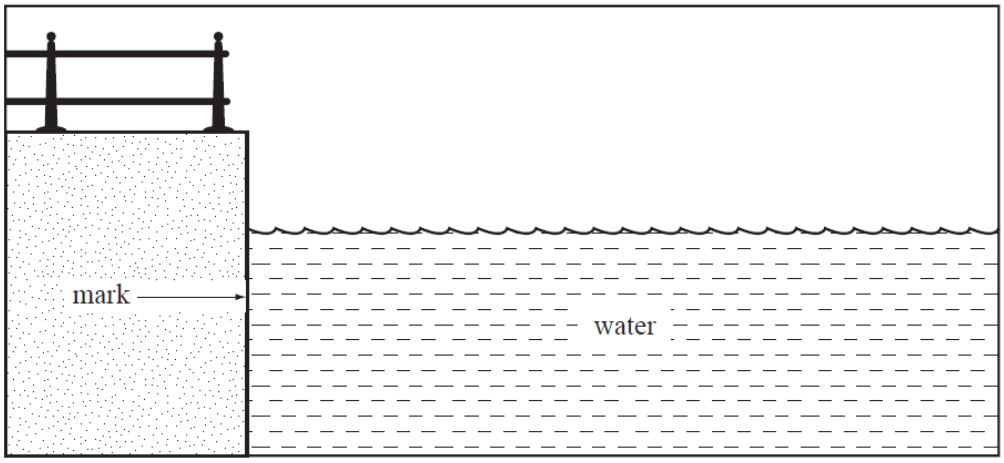
Work out

$$\frac{2\tan30°}{1-(\tan30°)^2}.$$ [2]

Question 24

Calculate the value of $2\sin 15° \cos 15°$. [1]

Question 25



The height, h metres, of the water, above a mark on a harbour wall, changes with the tide.
It is given by the equation

$$h = 3\sin(30t)^{\circ}$$

where t is the time in hours after midday.

(a) Calculate the value of h at midday. [1]

(b) Calculate the value of h at 19 00. [2]

(c) Explain the meaning of the negative sign in your answer. [1]

Question 26

Calculate $\left(3+3\sqrt{3}\right)^3$ giving your answer correct to 1 decimal place. [2]

Question 27

Use your calculator to find the value of [1]

$$\frac{6\sin 50^\circ}{\sin 25^\circ}.$$

Question 28

Work out $\frac{2+12}{4+3\times 8}$. [1]

Question 29

$V = 4p^2$

Find V when $p = 3$. [1]

Question 30

Calculate $(2.1 - 0.078)^{17}$, giving your answer correct to 4 significant figures. [2]

Question 31

Calculate. [1]

$$\frac{3.07 + 2^4}{5.03 - 1.79}$$

Question 32

Use your calculator to work out $\sqrt{10 + 0.6 \times (8.3^2 + 5)}$. [1]

Question 33

Use your calculator to find the value of 1.35^7.

Give your answer correct to 5 significant figures. [2]

Question 34

Calculate $\frac{8.24 + 2.56}{1.26 - 0.72}$. [1]

Question 35

Use a calculator to work out the following.

(a) $3\ (-4 \times 6^2 - 5)$ [1]

(b) $\sqrt{3} \times \tan 30° + \sqrt{2} \times \sin 45°$ [1]

Question 36

(a) Use your calculator to work out $\sqrt{65} - 1.7^2$.

Write down all the numbers displayed on your calculator. [1]

(b) Write your answer to **part (a)** correct to 2 significant figures. [1]

Question 37

Use your calculator to find the value of

$$\frac{8.1^2 + 6.2^2 - 4.3^2}{2 \times 8.1 \times 6.2}.$$ [2]

Question 38

Work out $11.3139 - 2.28 \times \sqrt[3]{9^2}$.

Give your answer correct to one decimal place. [2]

Question 39

Find the value of $\dfrac{7.2}{11.8 - 10.95}$.

Give your answer correct to 4 significant figures. [2]

Question 40

(a) Calculate $\sqrt[3]{7^{1.5} + 22^{0.9}}$ and write down your full calculator display. [1]

(b) Write your answer to **part (a)** correct to 4 significant figures. [1]

Question 41

Use your calculator to find $\sqrt{\frac{45 \times 5.75}{3.1 + 1.5}}$. [2]

Question 42

Use your calculator to find the value of

(a) $3^0 \times 2.5^2$, [1]

(b) 2.5^{-2}. [1]

Question 43

Find the value of $\dfrac{\sqrt[3]{17.1-1.89}}{10.4+\sqrt{8.36}}$. [2]