Final Year Mock Examination Paper 2



Multiple Choice Questions

For each question, choose the most suitable answer and write its letter (A, B, C or D) in the brackets provided. Each question carries 2 marks.

1. Which one of the following warning symbols will be labelled on the ammonia solution container?

A



B



C



D



]

2. Given below is a laboratory apparatus.



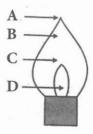
This apparatus is used for _

- A collecting liquids
- B containing gases
- C measuring a fixed volume of liquid very accurately
- D holding liquids or chemicals for heating

3.	$\label{lem:analytical} A \ Vernier \ caliper \ can \ be \ used \ to \ measure \ short \ lengths \ with \ an \ accuracy \ of \underline{\hspace{1cm}}.$					
	A	0.1 cm	В	0.01 mm		
	C	0.1 mm	D	0.001 cm	[]
4.		teel pipe has an average external cm. The thickness of the wall of		neter of 9.6 cm and an average internal dia teel pipe is	amete	er of
	A	1.65 cm	В	3.2 cm		
	C	3.3 cm	D	3.4 cm	[]
5.	Wł	nat is the reading shown on the	Verni	er caliper?		
	A	5.73 cm				
	В	6.17 cm		5 6 cm		
	C	5.63 cm		0 5 10		
	D	5.68 cm			[]
6.	Wł	nich of the following is a charact	eristi	c of a non-luminous flame?		
	A	It is produced when the air hol	e is cl	osed.		
	В	It is a steady flame.				
	C	It produces soot.				
	D	It is a yellow flame.			[]
7.	Wł	nich of the following is a compo	und?			
	A	Oxygen gas	В	Air		
	C	Carbon dioxide	D	Salt solution	[]
8.	Wł	nat happens to the particles in a	solid	when a solid melts?		
	A	The particles still vibrate about	their	fixed positions.		
	В	The particles move about freely and randomly in all directions.				
	C	The particles break free from b	eing	held in their fixed positions.		
	D	The particles stop vibrating.			[]

9.		nat are the correct steps to take to supples of the components?	sepa	rate a mixture of salt and chalk to obtain p	oure,	dry
	A	Crystallisation, filtration				
	В	Filtration, crystallisation, pat dry	y wit	th filter paper		
	C	Dissolve in water, filtration, pat of	dry	with filter paper		
	D	Dissolve in water, filtration, pat of	dry	with filter paper, evaporation to dryness	[]
10.	Wł	nich of the following tissues are pr	eser	nt in animals?		
	A	Photosynthetic tissue				
	B	Epidermal tissue				
	C	Epithelial tissue				
	D	Vascular tissue			[]
11.	Wł	nich of the following properties all	lows	s dyes to be separated by chromatography	?	
	A	Boiling point of dyes	В	Melting point of dyes		
	C	Density of dyes	D	Solubility of dyes	[]
12.		lcium chloride is represented by the true about calcium chloride?	ne fo	ormula CaCl ₂ . Which of the following state	ment	ts is
	A	It consists of three atoms.				
	В	It is made of two different element	nts.			
	C	It is a compound which can be so	epar	rated only by chemical means.		

13. The diagram below shows a flame on a Bunsen burner. Which label shows the hottest part of the flame?



D It is a mixture made up of three different elements.

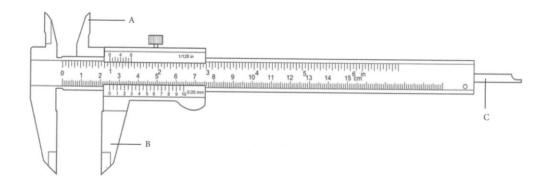
14.	An experiment was carried out to determine the rate of growth of mould on pieces of bread placed in a cupboard, exposed on a table and in a fridge. Which of the following shows a controlled variable in this experiment?					
	\mathbf{A}	The location				
	В	The temperature of the surrour	nding	gs.		
	C	The type of bread				
	D	The amount of moisture in the	air		[]
15.	Wł	nich of the following shows an ele	emer	nt?		
	A	H_2O	В	Be		
	C	КОН	D	CO	[]
16.	Wł	nich of the following is not a char	racte	ristic of a mixture?		
	\mathbf{A}	Has fixed ratio of elements				
	В	Can be separated by physical m	eans			
	C	Retains properties of original su	ıbsta	nces		
	D	Does not release energy when for	orme	ed	[]
17.	Wh	nat is the speed of light in a vacuu	ım?			
	A	300 m/s	В	3000 m/s		
	C	300000 m/s	D	300000000 m/s]]
18.	Wh	nich of the following gives the bes	st ref	lective surface?		
	A	Smooth, white surface	В	Smooth, silver surface		
	C	Rough, black surface	D	Rough, white surface]]
19.	Lig	Light will bend when it travels from one medium to another. In which change in medium will light bend the most?			um	
	A	Glass to air	В	Glass to water		
	C	Air to water	D	Water to air	[]
20.	Ligl	ht can be dispersed into seven ma	ain c	olours. Which coloured light will bend the	e mos	st?
	A	Red	В	Orange		
	C	Green	D	Violet	[]

Section B

Short Answer Questions

Answer all the questions in the spaces provided. The marks for each question are given in brackets.

- 1. (a) Define the term 'density'. [2]
 - **(b)** A rectangular piece of wood has a mass of 4.5 kg. Its dimensions are 26.0 cm by 20.0 cm by 10.0 cm. Calculate the density of the wood in kg/m³. Express your answer correct to 3 significant figures.
- **2.** The diagram below shows a Vernier caliper. Write down the part of the Vernier caliper A, B or C that is used to measure the following dimensions.



- (a) Measure the depth of a test tube.
- (b) Measure the external diameter of a test tube.
- (c) Measure the internal diameter of a test tube.

3. Copper is a metal that is used to make electrical wires. It is a good conductor of heat and electricity. The chemical symbol of copper can be represented as shown below.

> 29 Cu 64

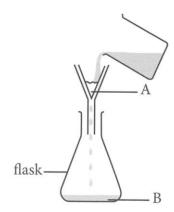
(a)	How many protons, neutrons and electrons are present in an atom of copper?				
	Number of protons :				
	Number of electrons:				

(b) The ion of copper is given by the symbol Cu²⁺. What does this mean? [2]

(c)	In an atom, the number of	is always equal to the number of
	·	[1]

4. The diagram below shows a method of separation.

Number of neutrons:



(a) Name this method of separation.

(b) State the labels for A and B.

(c) Describe how a dry, pure sample of insoluble calcium carbonate can be collected from a mixture of calcium carbonate and water using this method of separation.

- 5. The diagram below shows a flower pot in front of a mirror. Draw a ray diagram to show
 - (a) the image of the shaded petal of the flower;

(b) light rays so that the student can see the image of the shaded petal in the mirror.





Student's eye



Free Response Questions

Answer all the questions in the spaces provided. The marks for each question are given in brackets.

1. The diagrams below show some hazard symbols. Describe the precautions to take when handling such substances.



(b)



(c)



(d)



[3]

2. (a) Classify the following substances into compounds and mixtures. [5]

Seawater	Common salt	Ammonia	Alcohol	Milk
Air	Hydrochloric acid	Blood	Brass	Water

Compounds	Mixtures
a 1	

(b) State three differences between the properties of a compound and a mixture.

Compound	Mixture
,	

3.	(a)	Stat	e three properties of the following materials. [6]
		(i)	Plastics:
		(ii)	Ceramics:
	(b)	Wh	at is meant by a composite material? Give one example and its advantage. [4]
		-	