

B G C S E

COMBINED SCIENCE

EXAMINATION PAPERS

UNDERSTAND • PRACTICE • SUCCEED





THE OPENHANDED CLASSROOM

LEARN MORE. ACHIEVE MORE. SMILE MORE.



BGCSE CLASSES

- ✓ Exam-Focused Learning
- ✓ Past Papers & Strategies
- ✓ Stronger Understanding
- ✓ Better Grades, Brighter Future



[**CLICK HERE**](#)



SAT CLASSES

- ✓ Smart Test Strategies
- ✓ Stronger Scores
- ✓ Time Management Skills
- ✓ College & Scholarship Ready



[**CLICK HERE**](#)



BJC CLASSES

- ✓ Clear, Simple Explanations
- ✓ Focus on Understanding
- ✓ Help That Fits Your Pace
- ✓ Build Confidence, Get Results



[**CLICK HERE**](#)



EXPERT TEACHING.
PROVEN RESULTS.



LEARN SMARTER.
ACHIEVE MORE.



FOCUSED SUPPORT.
REAL RESULTS.



THEOPENHANDEDCLASSROOM:
(242) 426-8891



THE OPENHANDED CLASSROOM

BGCSE FREE SOLUTIONS MANUALS

COMPLETE SOLUTIONS FOR ALL
MAJOR SUBJECTS

- ⦿ MATHEMATICS
- ⦿ ENGLISH LANGUAGE
- ⦿ HISTORY
- ⦿ RELIGIOUS STUDIES
- ⦿ ACCOUNTS
- ⦿ SCIENCES (BIOLOGY, PHYSICS,
COMBINED SCIENCE)
- ⦿ FOREIGN LANGUAGE
(FRENCH AND SPANISH)

UNDERSTAND. PRACTICE. SUCCEED.

[CLICK HERE](#)

EXAM-REAL.

EXAM-PROVEN.

FREE LISTENING COMPREHENSION — AUDIO FILES —



THE **EXACT AUDIO** USED
IN PAST BJC & BGCSE EXAMS



REAL EXAMS

The exact listening comprehension audio from past papers.



REAL PREPARATION

Hear what you'll hear in the real exam.



REAL RESULTS

Practise with purpose. Improve your confidence and performance.

AVAILABLE FOR:



BJC
ENGLISH



BGCSE
ENGLISH LANGUAGE



BJC
FRENCH



BJC
SPANISH



BGCSE
FRENCH



BGCSE
SPANISH

WHY THESE AUDIO FILES MATTER



EXACT AUDIO

The exact recordings used in past BJC & BGCSE exams.



EXAM FAMILIARITY

Get used to the real voices, speed, accents and exam conditions.



STRATEGIC ADVANTAGE

Walk in confident knowing exactly what to expect.



100% FREE

High quality. No cost. Just results.



CLICK HERE

DOWNLOAD • START PRACTISING



BETTER PREPARATION.
BETTER RESULTS.

You've got this!

PAST EXAMS. **REAL AUDIO**. BETTER PREP. GREATER CONFIDENCE.

School Number	Candidate Number
Surname and Initials	

COMBINED SCIENCE

PAPER 1 3102/1

Wednesday **28 MAY 2025** 12:00 NOON–1:15 P.M.

No additional materials required.

MINISTRY OF EDUCATION NATIONAL EXAMINATIONS

BAHAMAS GENERAL CERTIFICATE OF SECONDARY EDUCATION

INSTRUCTIONS FOR CANDIDATES

Do not open this booklet until you are told to do so.

Write your school number, candidate number, surname and initials in the spaces provided on this question booklet.

There are **FIFTY** questions on this paper.

Attempt **ALL** questions.

For each question, there are **FOUR** possible answers labelled **A, B, C** and **D**. Choose the **ONE** you consider correct and record your choice by circling the **LETTER** next to the answer of your choice in the booklet.

A copy of the Periodic Table is printed on page 2.

Calculators are permitted, however **NO** graphing calculators are allowed.

FOR EXAMINER'S USE ONLY

Total Marks

This question paper consists of 15 printed pages and 1 blank page.

The Periodic Table of the Elements

Group																			
I	II						III	IV	V	VI	VII	0							
1 H Hydrogen												4 He Helium 2							
7 Li Lithium 3	9 Be Beryllium 4											11 B Boron 5	12 C Carbon 6	14 N Nitrogen 7	16 O Oxygen 8	19 F Fluorine 9	20 Ne Neon 10		
23 Na Sodium 11	24 Mg Magnesium 12											27 Al Aluminium 13	28 Si Silicon 14	31 P Phosphorus 15	32 S Sulphur 16	35.5 Cl Chlorine 17	40 Ar Argon 18		
39 K Potassium 19	40 Ca Calcium 20	45 Sc Scandium 21	48 Ti Titanium 22	51 V Vanadium 23	52 Cr Chromium 24	55 Mn Manganese 25	56 Fe Iron 26	59 Co Cobalt 27	59 Ni Nickel 28	64 Cu Copper 29	65 Zn Zinc 30	70 Ga Gallium 31	73 Ge Germanium 32	75 As Arsenic 33	79 Se Selenium 34	80 Br Bromine 35	84 Kr Krypton 36		
85 Rb Rubidium 37	88 Sr Strontium 38	89 Y Yttrium 39	91 Zr Zirconium 40	93 Nb Niobium 41	96 Mo Molybdenum 42	98 Tc Technetium 43	101 Ru Ruthenium 44	103 Rh Rhodium 45	106 Pd Palladium 46	108 Ag Silver 47	112 Cd Cadmium 48	115 In Indium 49	119 Sn Tin 50	122 Sb Antimony 51	128 Te Tellurium 52	127 I Iodine 53	131 Xe Xenon 54		
133 Cs Caesium 55	137 Ba Barium 56	139 La Lanthanum 57	178 Hf Hafnium 72	181 Ta Tantalum 73	184 W Tungsten 74	186 Re Rhenium 75	190 Os Osmium 76	192 Ir Iridium 77	195 Pt Platinum 78	197 Au Gold 79	201 Hg Mercury 80	204 Tl Thallium 81	207 Pb Lead 82	209 Bi Bismuth 83	210 Po Polonium 84	210 At Astatine 85	222 Rn Radon 86		
Fr Francium 87	226 Ra Radium 88	227 Ac Actinium 89																	
* 58-71 Lanthanoid series † 90-103 Actinoid series																			
a X b a = relative atomic mass X = atomic symbol b = proton (atomic) number																			
140 Ce Cerium 58 141 Pr Praseodymium 59 144 Nd Neodymium 60 147 Pm Promethium 61 150 Sm Samarium 62 152 Eu Europium 63 157 Gd Gadolinium 64 159 Tb Terbium 65 162 Dy Dysprosium 66 165 Ho Holmium 67 167 Er Erbium 68 169 Tm Thulium 69 173 Yb Ytterbium 70 175 Lu Lutetium 71 232 Th Thorium 90 238 U Uranium 92 239 Pa Protactinium 91 241 Np Neptunium 93 244 Pu Plutonium 94 247 Am Americium 95 251 Cm Curium 96 254 Bk Berkelium 97 259 Cf Californium 98 265 Es Einsteinium 99 267 Fm Fermium 100 271 Md Mendelevium 101 274 No Nobelium 102 277 Lr Lawrencium 103																			

* 58-71 Lanthanoid series
† 90-103 Actinoid series

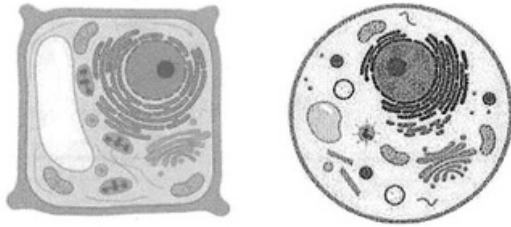
Key

^a X _b

a = relative atomic mass
X = atomic symbol
b = proton (atomic) number

1. The diagram shows two types of cells.

Which structure is **not** found in both cells?



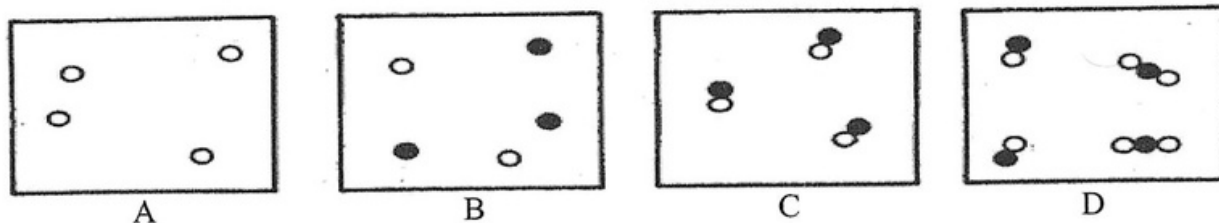
- A. cell membrane
B. cell wall
C. cytoplasm
D. nucleus
2. Which statement best describes what happens to the particles when a liquid freezes?
- A. They gain kinetic energy and are arranged in a fixed pattern.
B. They gain kinetic energy and move freely from place to place.
C. They lose kinetic energy and move away from each other.
D. They lose kinetic energy and do not move from place to place.
3. The sides of a cuboid measure 8 cm wide, 10 cm long and 15 cm tall.

What is the volume of the cube?

- A. 33 cm^3
B. 95 cm^3
C. 150 cm^3
D. 1200 cm^3

The diagrams show the arrangement of atoms in four substances.

Use the diagram to answer questions 4 and 5

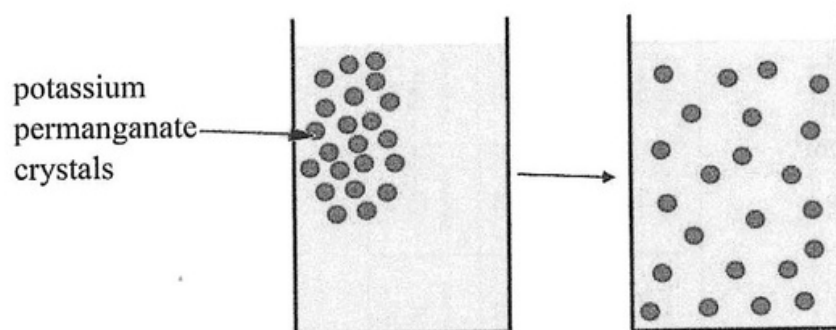


4. Which diagram represents a mixture of compounds? A. B. C. D.

5. Which diagram represents atoms of one element? A. B. C. D.

6. What happens when water is heated from 20°C to 30°C?
 - A. density increases
 - B. mass increases
 - C. volume decreases
 - D. volume increases

7. The diagrams show potassium permanganate crystals in a beaker of water at the beginning and end of an experiment.



Which process is occurring in the experiment?

- A. active transport
- B. diffusion
- C. osmosis
- D. transpiration



8. The table shows the mass of nutrients in 100 g of ripe watermelon.

NUTRIENT	MASS (g)
Sugar	7.5
Fat	0.2
Fibre	0.8
Water	91.5

What is the mass of the nutrient in the watermelon that helps to increase the bulk of faeces?

- A. 0.2
B. 0.8
C. 7.5
D. 91.5
9. The cooling fans of a refrigerator are painted black.
- Which method(s) of heat transfer does this improve?
- A. conduction only
B. convection only
C. radiation only
D. convection and conduction
10. Which row in the table correctly identifies the end products of digestion?

	carbohydrates	fats	proteins
A	calcium	amino acids	sucrose
B	glucose	fatty acid and glycerol	amino acids
C	lipases	fatty acid and glycerol	amino acids
D	sucrose	lipase	starch

11. What is the electron configuration of the magnesium ion in magnesium chloride?

- A. 2.8
- B. 2.8.2
- C. 2.8.4
- D. 2.8.8

12. A spring is stretched by hanging a block of metal from it.

Which force causes the spring to stretch?

- A. elastic
- B. friction
- C. weight
- D. magnetic

13. What happens to an atom when a covalent bond is formed?

- A. lose protons
- B. lose outer-shell electrons
- C. share inner-shell electrons
- D. share outer-shell electrons

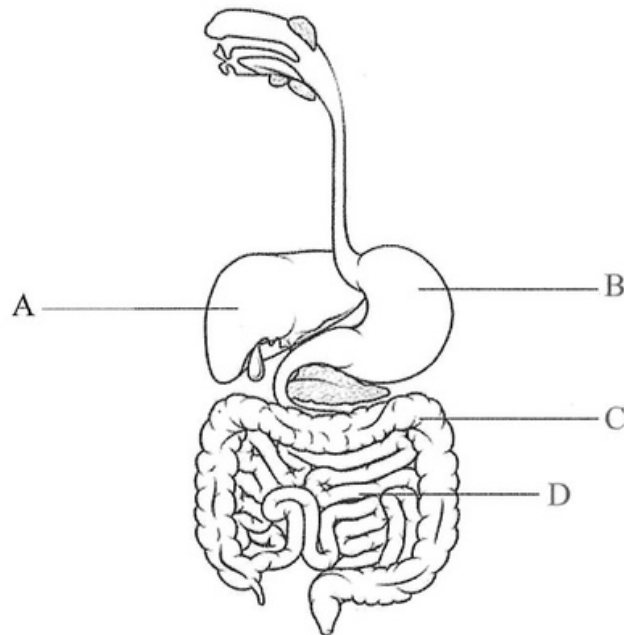
14. Which force slows down a moving object?

- A. tension
- B. friction
- C. electrostatic
- D. weight



15. The diagram shows the human alimentary canal and associated organs.

In which labelled structure does the absorption of digested products take place?

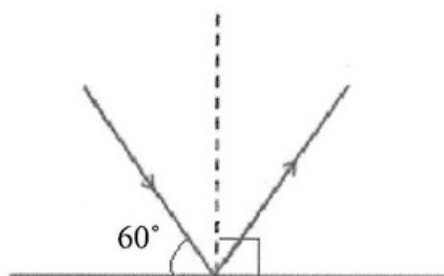


16. Which is a renewable source of energy?
- A. biomass
 - B. coal
 - C. natural gas
 - D. oil
17. Which statement does **not** give the correct information on the role of the liver?
- A. breaks down alcohol and drugs
 - B. it stores glycogen
 - C. makes red blood cells
 - D. produces urea
18. Which type of bonding involves the transfer of electrons between atoms?
- A. ionic bonding only
 - B. covalent bonding only
 - C. metallic bonding and ionic bonding
 - D. covalent bonding and ionic bonding

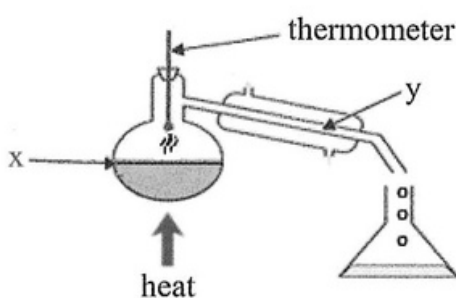
19. When the loudness of a musical notes is increased, which property of the sound wave has changed?
- A. amplitude
 - B. frequency
 - C. speed
 - D. wavelength
20. X and Y represents two elements on the Periodic Table. One atom of X reacts with three atoms of Y.
- What is the formula of the product?
- A. X_3Y
 - B. X_3Y_3
 - C. XY
 - D. XY_3
21. If Sally's heart pumps seven gallons of blood in one minute, how many gallons of blood will her heart pump in one hour?
- A. 70 gallons
 - B. 60 gallons
 - C. 240 gallons
 - D. 420 gallons
22. Which process is responsible for the breakdown of glucose in the presence of oxygen?
- A. aerobic respiration
 - B. anaerobic respiration
 - C. breathing
 - D. excretion



23. Determine the angle of reflection for the ray of light shown.



- A. 30°
 B. 60°
 C. 90°
 D. 180°
24. The diagram shows an apparatus used to separate mixtures.



Which processes occur at the parts labelled x and y?

	x	y
A	boiling	cooling
B	condensation	evaporation
C	cooling	boiling
D	evaporation	condensation

25. Light waves pass from air into glass.

Which property of the wave always remain constant when this happens?

- A. direction
 B. frequency
 C. speed
 D. wavelength

26. Which equation represents anaerobic respiration during alcoholic fermentation?

- A. glucose + carbon dioxide $\longrightarrow$ lactic acid
- B. glucose + ethanol $\longrightarrow$ carbon dioxide
- C. glucose $\longrightarrow$ ethanol + carbon dioxide
- D. glucose $\longrightarrow$ lactic acid + carbon dioxide

27. A solution has a high concentration of hydrogen ions (H^+).

What is the pH of the solution?

- A. 1
- B. 7
- C. 9
- D. 11

28. Which of these statements is **not** an example of a chemical change?

- A. burning petrol to form water and carbon dioxide
- B. shiny steel rusts
- C. molten iron solidifying
- D. zinc dissolving in hydrochloric acid

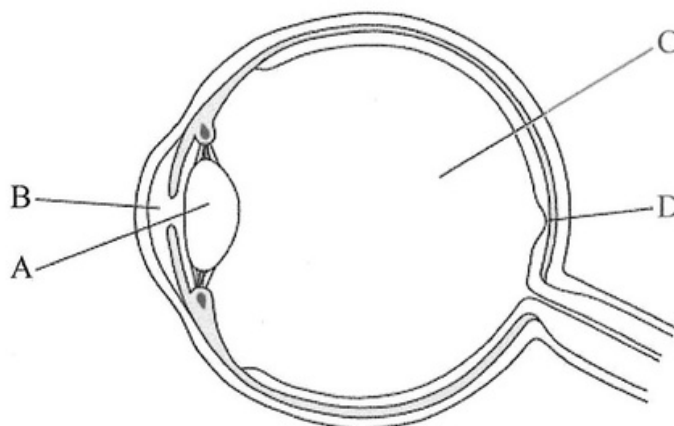
29. Which tissue connects a bone to a bone?

- A. cartilage
- B. ligament
- C. muscle
- D. tendon



30. The diagram shows a section through the human eye.

Which labelled structure nourishes the eye and keeps proper eye pressure?



31. Which of the listed non-metals is a colourless, odourless gas that relights a glowing splint?

- A. chlorine
- B. hydrogen
- C. nitrogen
- D. oxygen

32. Which hormone is responsible for controlling blood glucose levels?

- A. adrenaline
- B. oestrogen
- C. insulin
- D. testosterone

33. Which is the SI unit of current?

- A. Ampere
- B. Coulomb
- C. Newton
- D. Ohm

34. Which gas, when its proportion increases in the atmosphere, is the major cause of global warming?

- A. ammonia
- B. carbon dioxide
- C. oxygen
- D. sulphur dioxide



35. Which row gives the correct symbols for the SI unit for energy and potential difference?

	energy	potential difference
A	J	N
B	J	V
C	W	N
D	W	V

36. Which method of contraception is tubal ligation?

- A. chemical
- B. mechanical
- C. natural
- D. surgical

37. Which is a charged particle in the nucleus of an atom?

- A. electron
- B. ion
- C. neutron
- D. proton

38. Alex is experiencing a burning sensation while urinating.

Which sexually transmitted infection has this symptom?

- A. AIDS
- B. gonorrhea
- C. syphilis
- D. warts

39. Which method is best suited to test the purity of water?

- A. litmus paper
- B. melting and boiling points
- C. pH meter
- D. hydrogen carbonate



40. Which two cations cause hard water in The Bahamas?

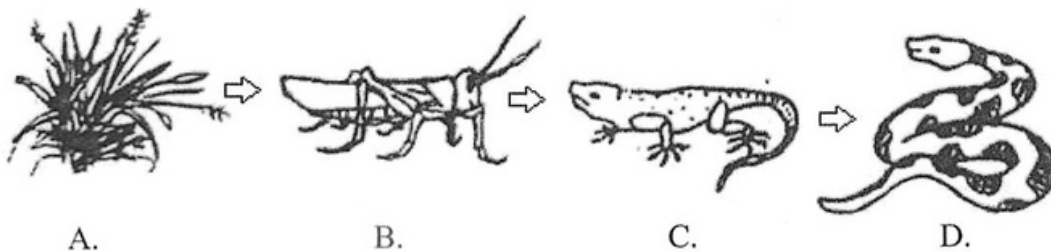
- A. Al^{3+} and Mg^{2+}
- B. Ca^{2+} and Mg^{+}
- C. Ca^{2+} and Mg^{2+}
- D. Na^{+} and Ca^{2+}

41. Why are lamps in a house connected in parallel rather than in series?

- A. If one lamp stops working, the remaining lights become brighter.
- B. Less current is taken from the power supply.
- C. The lamps can be turned off independently using switches.
- D. When more lamps are added, their brightness decreases.

42. The diagram shows a food chain.

Which organism is a second level consumer?



43. Which structure is a characteristic of the red mangrove plant?

- A. breathing roots
- B. brown roots
- C. prop roots
- D. salt glands

44. Why is the overloading of electrical circuits at home dangerous?

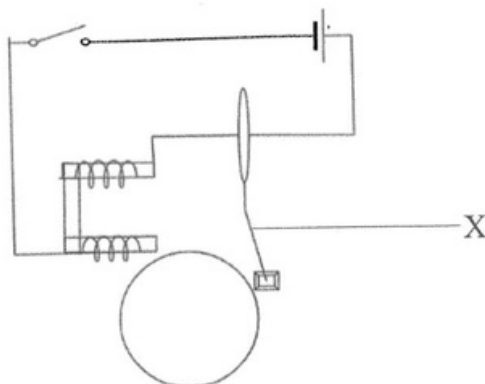
- A. It can cause increase in monthly usage.
- B. It can lead to fires.
- C. It can cause longer lifespan of electrical appliances.
- D. It can keep electrical wires cool



45. Which metal is primarily extracted from bauxite ore?

- A. iron
- B. copper
- C. aluminium
- D. gold

46. The diagram shows a circuit for an electric bell. X is a metal bar that is attracted to the electromagnet.



Which material is X most likely to be?

- A. brass
- B. copper
- C. iron
- D. zinc

47. What is the name of the excessive growth of algae in lakes and river?

- A. bioaccumulation
- B. biomagnification
- C. contamination
- D. eutrophication

48. Many metals are extracted from their ores by heating the metal oxide with carbon.

Which metal cannot be extracted using this method?

- A. aluminium
- B. copper
- C. iron
- D. zinc



49. Why is it important to conserve natural resources?

- A. They can be reused.
- B. They can be easily replaced.
- C. They can be easily exported.
- D. They take a long time to be replaced.

50. Which activity is **not** important in biotechnology?

- A. diagnosis of diseases
- B. enhancing growth of plants
- C. improving colour and shelf life of food
- D. lowering crop yields



BLANK PAGE

