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| FOR EXAMINER'S USE ONLY |  |
| TOTAL MARKS             |  |

|            |               |
|------------|---------------|
| SCHOOL No. | CANDIDATE No. |
|            |               |
| INITIALS   | SURNAME       |
|            |               |

**MINISTRY OF EDUCATION  
BAHAMAS JUNIOR CERTIFICATE  
EXAMINATION**

**0047 GENERAL SCIENCE  
PAPER 1 MULTIPLE CHOICE QUESTIONS  
(40 Marks)**

Wednesday **31 May 2017** 1:00 P.M.–2:00 P.M.

**INSTRUCTIONS TO 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 at the top right hand side of this page.

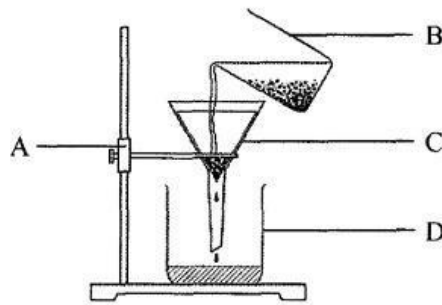
For each question, there are four suggested answers A, B, C and D. When you have selected an answer to a question, circle the letter by the answer which you have chosen.

Answer **ALL** the questions in this booklet. Do any necessary rough work and calculations in your booklet.



This question paper consists of **11** printed pages and **1** blank page.

1. The diagram shows the set up of the apparatus for filtration.



In which piece of apparatus is a folded filter paper placed?

2. Which process gets rid of waste materials from living organisms?

- A circulation
- B excretion
- C nutrition
- D reproduction

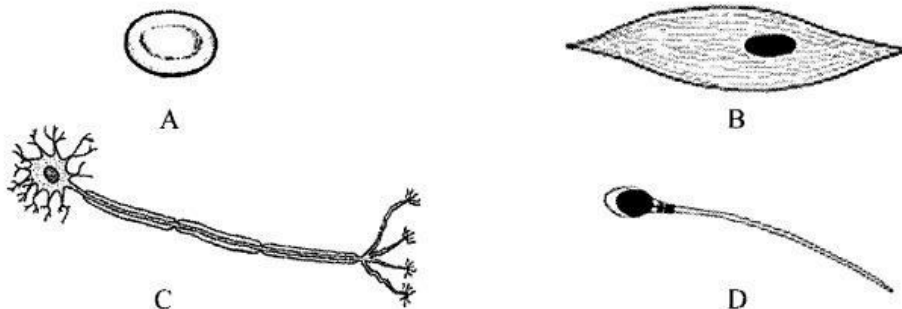
3. Which statement is true for both plants and animals?

- A They excrete urine.
- B They feed on a variety of foods.
- C They move from place to place.
- D They use oxygen for respiration.

4. Which substance is found only in plant cells?

- A cellulose
- B cytoplasm
- C nucleus
- D vacuole

5. Which cell has the ability to cause movement by contracting and relaxing?



6. The fusion of a male gamete and a female gamete forms a zygote.

What is the name of this process?

- A fertilisation
- B germination
- C pollination
- D reproduction

7. Which process is required for the production of ova and for the preparation of the uterus for pregnancy?

- A implantation
- B menstrual cycle
- C ovulation cycle
- D reproduction

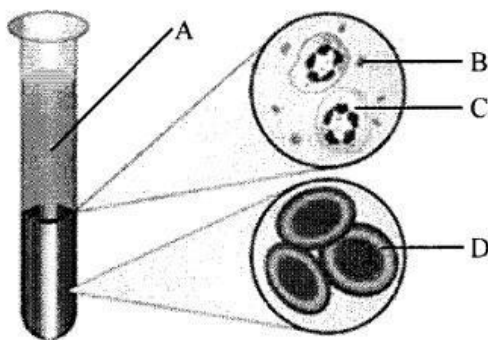
8. Which contraceptive contains synthetic hormones and is taken orally?

- A condom
- B diaphragm
- C IUD
- D the "pill"

9. Which disease is **not** contagious and **not** sexually transmitted?

- A cancer
- B gonorrhoea
- C HIV
- D syphilis

10. The diagram shows a blood sample after being separated into its parts.



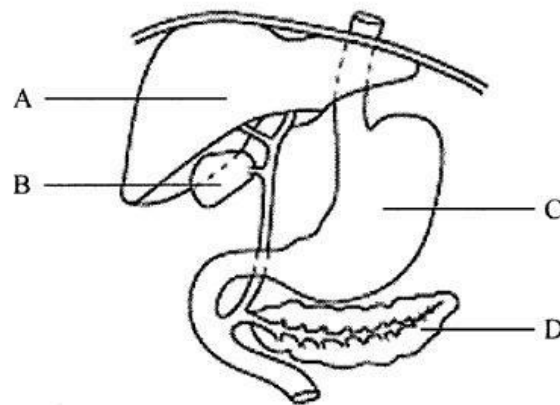
Which labelled part protects the body against both infectious diseases and foreign invaders?

11. What is the function of enzymes in the process of digestion?

- A maintains the rate of digestion
- B slows down the rate of digestion
- C speeds up the rate of digestion
- D stops the rate of digestion



12. The diagram shows some organs in the digestive system.



Which organ converts stored glucose to sugar to provide energy?

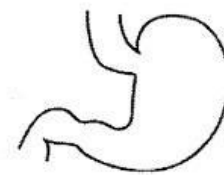
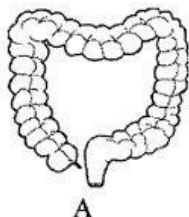
13. Which gas is **produced** as a by-product of photosynthesis?

- A carbon dioxide
- B nitrogen
- C oxygen
- D water vapour

14. Which disease is caused by a deficiency of the mineral iron in the body?

- A anaemia
- B goiter
- C rickets
- D scurvy

15. The diagram shows four structures in the digestive system.



A

B

C

D

In which structure does the digestion of starch begin?



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16. Many food substances contain mild acids.

Which row in the table shows the food substance and the name of the acid it contains?

|   | food substance | acid     |
|---|----------------|----------|
| A | lemon          | lactic   |
| B | milk           | carbonic |
| C | soda beverage  | citric   |
| D | vinegar        | acetic   |

17. Air is a mixture of gases.

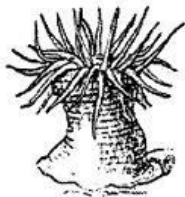
Which gas has been affected by the increasing use of fossil fuels?

- A argon
- B carbon dioxide
- C nitrogen
- D oxygen

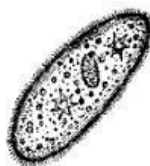
18. Which organism is a coelenterate?



A



B

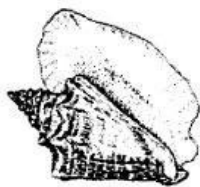


C



D

19. Which organism is an endangered species in The Bahamas?



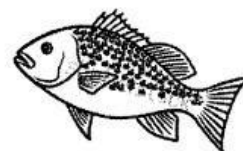
A



B



C

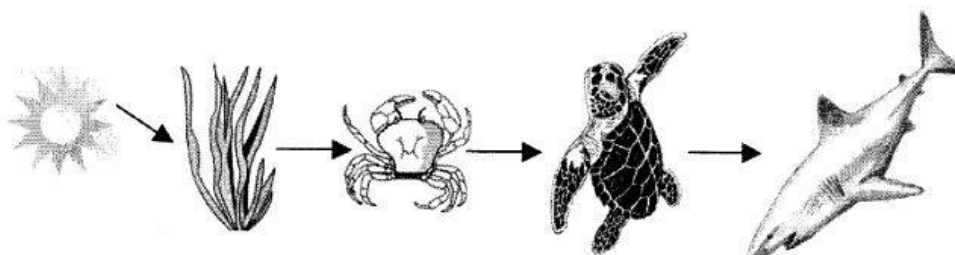


D



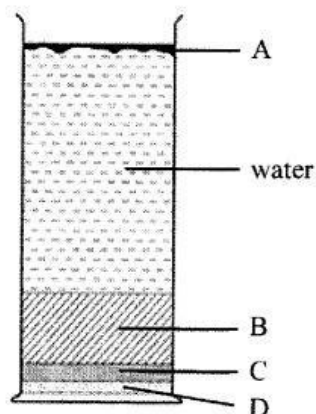


20. The diagram shows a basic food chain.



What do the arrows in the food chain mean?

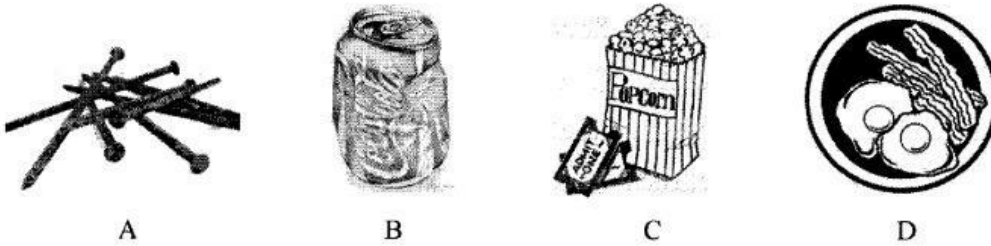
- A consumer
  - B energy flow
  - C producer
  - D organism
21. Which **basic unit** makes up all matter and has the properties of an element?
- A an atom
  - B a compound
  - C a mixture
  - D a solution
22. Which chemical structure represents a molecule of water?
- A  $\text{HO}_2$
  - B  $\text{H}_2\text{O}$
  - C  $\text{He}_2\text{O}$
  - D  $\text{HeO}_2$
23. The diagram shows the profile of a soil sample.



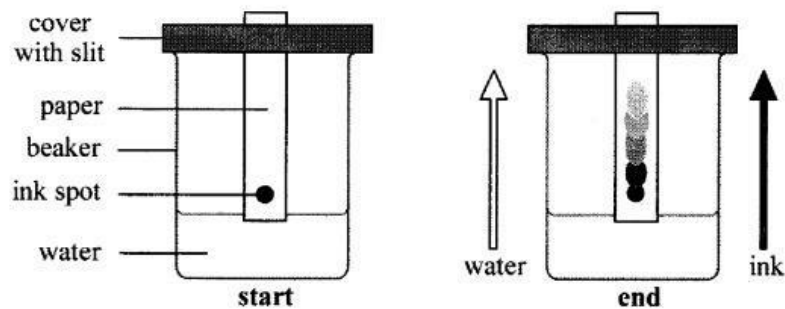
Which layer of the soil profile is **organic** matter?



24. Which picture shows an example of physical change?



25. Mixtures can be separated using different methods. One method is shown in the diagram.



Which method is shown in the diagram?

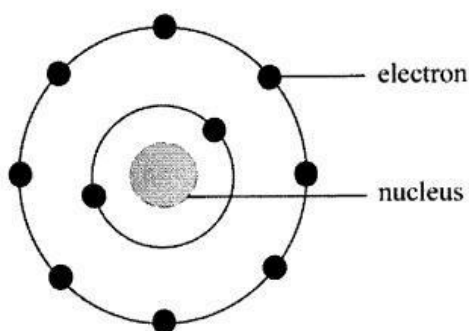
- A chromatography  
 B evaporation  
 C filtration  
 D magnetism
26. Which element is a non-metallic gas at room temperature?
- A carbon  
 B nitrogen  
 C sulfur  
 D silicon
27. Which statement defines diffusion?
- The movement of molecules
- A across a semi-permeable membrane  
 B across a permeable membrane  
 C from low concentration to high concentration  
 D from high concentration to low concentration
28. A student stirs sugar in warm water to form a solution.

What part is the sugar in this solution?

- A element  
 B mixture  
 C solute  
 D solvent

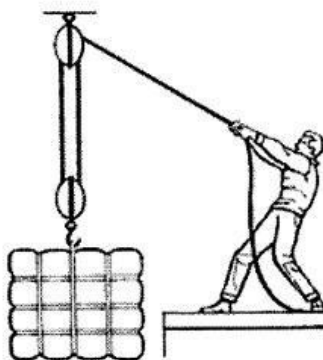


29. The diagram shows the electrons in an atom.



What is the number of protons in the nucleus of this atom?

- A 2
  - B 6
  - C 8
  - D 10
30. The diagram shows a worker using a simple machine.



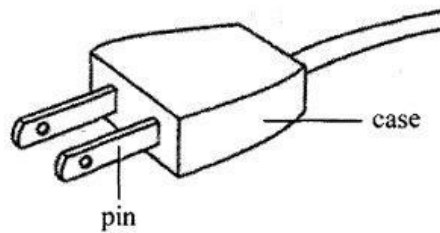
Which row in the table matches the name of the simple machine with the force it has to overcome?

|   | simple machine | force    |
|---|----------------|----------|
| A | pulley         | gravity  |
| B | pulley         | friction |
| C | wheel and axle | gravity  |
| D | wheel and axle | friction |





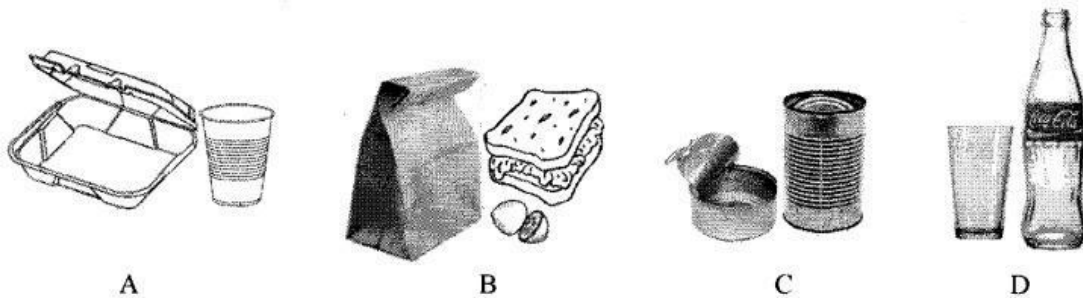
31. The diagram shows the end plug of an extension cord.



Which materials are most suitable to make the pins and the case of the electric plug?

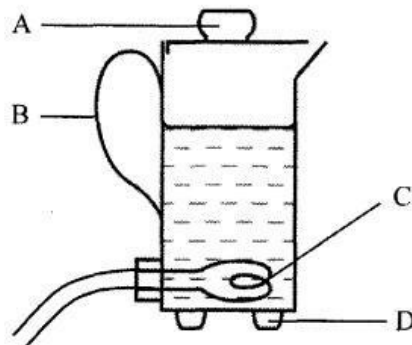
|   | pins    | case    |
|---|---------|---------|
| A | copper  | plastic |
| B | glass   | rubber  |
| C | plastic | glass   |
| D | rubber  | copper  |

32. The diagram shows groups of various items.



Which items are biodegradable?

33. The diagram shows an electric kettle.



Which labelled part conducts electricity which is then converted into heat energy?



34. Light rays can pass through transparent materials.

Which process takes place when light rays travel from air into glass or water?

- A absorption
- B dispersion
- C reflection
- D refraction

35. Metals react when heated.

What happens to metals when they cool after heating?

- A contract
- B decompose
- C expand
- D rust

36. What is produced when sound waves are reflected from a solid surface?

- A an echo
- B an image
- C a shadow
- D a spectrum

37. Which process is **not** a part of the nitrogen cycle?

- A combustion
- B decomposition
- C excretion
- D fixation

38. Which characteristic makes a coral reef biodiverse?

- A variety of animals
- B variety of plants
- C only one specific specimen
- D variety of living organisms

39. Alternative sources of biofuels are being developed to protect the Earth from the damages of pollution and global warming.

Which fuel is classified as a biofuel?

- A coal
- B ethanol
- C fossil fuel
- D petroleum



40. Most of our foods are preserved from the harmful effects of micro-organisms which cause foods to spoil.

Which process kills bacteria in liquid foods such as milk?

- A drying
- B filtration
- C pasteurisation
- D salting

