

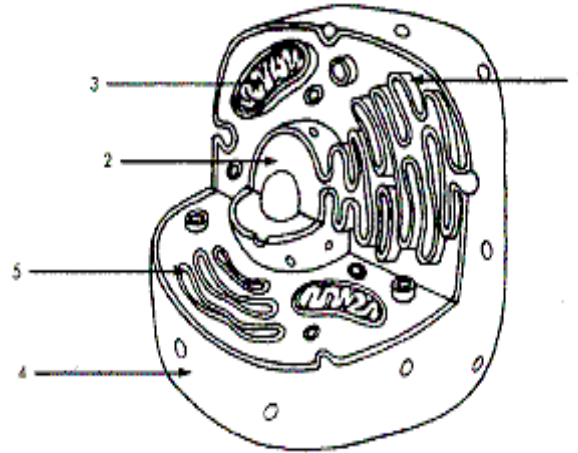
Science Practice Test KS-3 2014

TIME: 45 MINS

MARKS:.....

NAME:.....

{{ Calculator,pen, pencil and rubber can be usable. No other materials allowed without permission.}}



{Use above diagram to answer **qu1 to 5**; **Fig.1**: A model of animal cell. [Obtained from internet]}

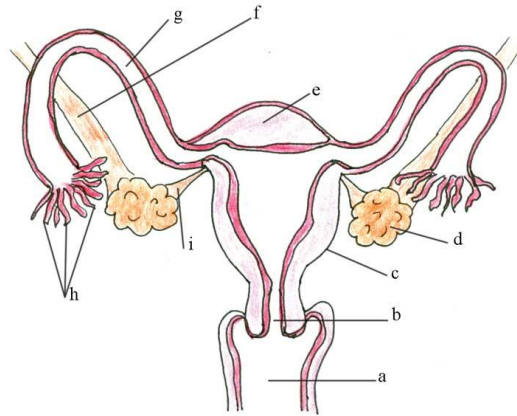
1. The brain of the cell is labelled by which number?
a.1 b.2 c.5 d.3

2. The power station of the cell is,
a.4 b.2 c.1 d.3

3. The place where most of the cell chemical reaction are taking place?
a.4 b.5 c.2 d. none of them

4. The DNA of a cell in part/s?
a. 2 and 5 b. 2 and 3 c. 2 only d.3 only

5. During the cell division, which part of the cell is not replicated?
a. 4 b.2 c.3 d. none of them.



{Fig.2: A typical human female reproductive system, Use this diagram to answer qu.6 to 8.[Internet]}

6. Where is fertilisation taking place in female reproductive system?

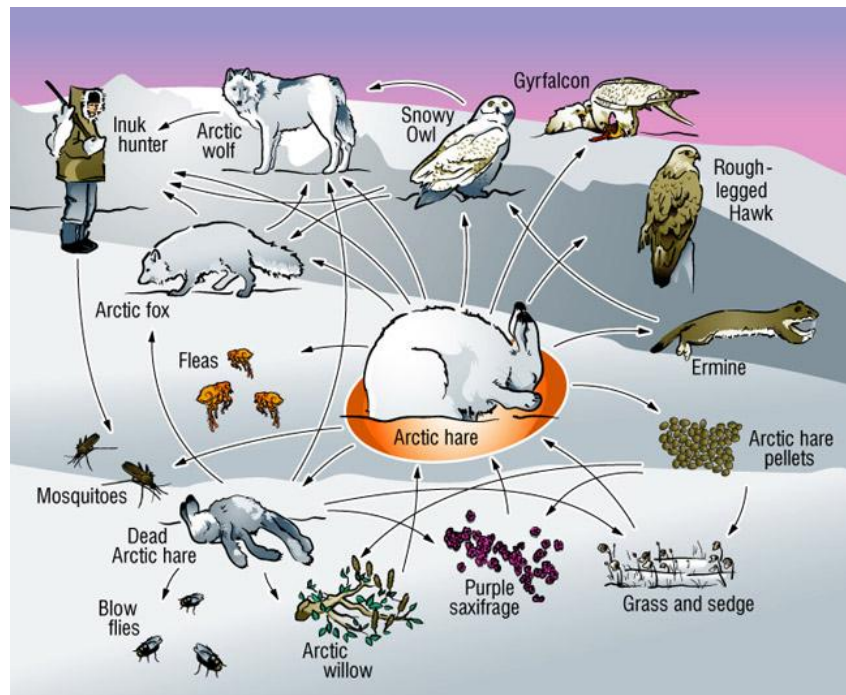
- a. a b.d c.g d.f

7. Where is most of the embryonic development taking place in female reproductive system?

- a.c b.b c.a d.g

8. In female reproductive system, where is cilia membrane lined up? And what is the use of cilia?

- a. d, absorption b. g ,moving egg c. b, moving sperm d. d, cleaning



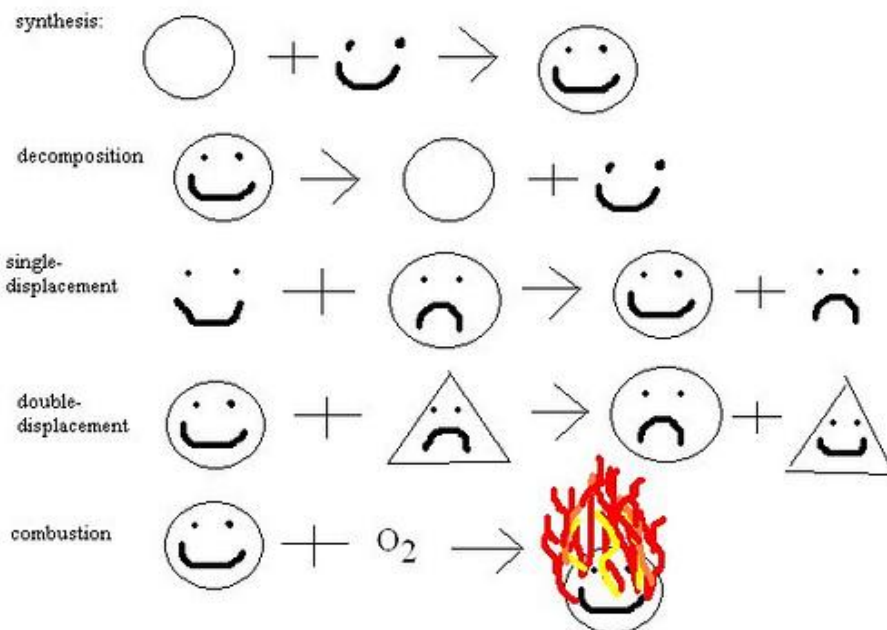
{Fig.3: an ecosystem. (Nature) source: Internet }

9. What is showed in Fig.3 most accurately?

- a. A food chain b. A food web c. Both a food chain and a web d. A food web and energy flow

10. In the above Fig.3 which type of eco-systems is represented?

- a. Desert b. Amazon Rainforest c. Woodland d. Arctic



{Table.1 shows main types of chemical reactions. Assume they are listed A to E [top to bottom]. Use this table to answer **qu.11 to 15**; Source: Internet)

11. Copper (Cu) + Hydrochloric acid (HCl) reaction belongs into which type of the above?

- a. A b.B c.C d. none of them

12. The production of Calcium oxide (CaO - quicklime) from limestone (CaCO₃) is which type of the above?

- a.B b.C c.E d.A

13. Most reactive metals can displace least reactive metal from its compound so that Iron can displace Copper from Copper sulphate. Identify which type, this reaction is belonging into?

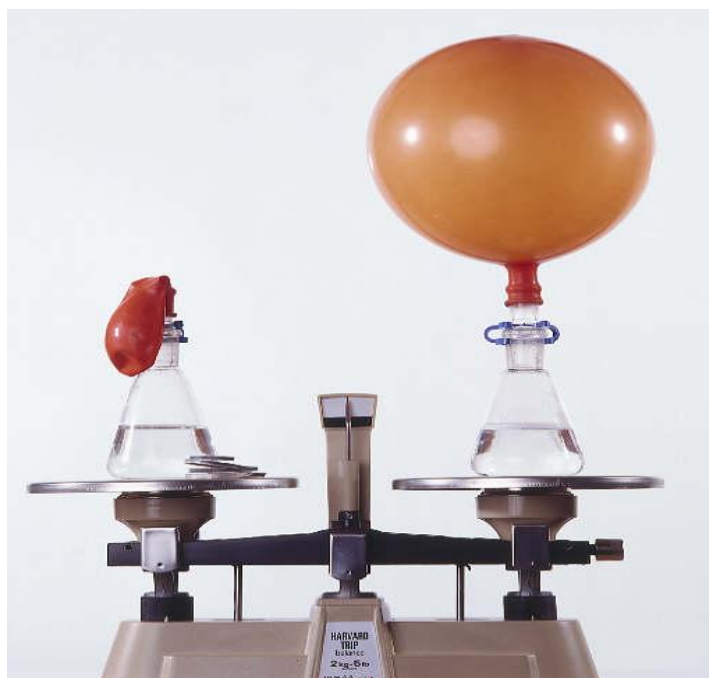
- a.B b.D c.C d.A

14. A student called Ann said "I can perform a chemical reaction using two salt solutions such as silver nitrate and sodium chloride in order to obtain a precipitate in school lab". Assume she might be succeeded in her statement. The reaction she mentioned belongs into which type?

- a.D b.A c.C d.B

15. A student called Nivethin challenged with his friend that both respiration in cells and burning petrol (a hydro carbon compound) in car engines are belonging into same category. Assume that his argument was winning. Which list in the below shows both list of elements in petrol and type of the reaction happening in burning petrol correctly and respectively?

- a. C,O & E b. C,H & A c. C,H & E d. C,H,O & E



{Fig.4. A chemical reaction- Left: reactants and Right: products. Source: internet }

{ A student called Anojan had performed an experiment to check whether the mass of reactants or products of a chemical reaction changes or not at the end of a reaction. He had used powdered Marble and a strong acid along with apparatus setup as shown above. Use this information to answer **Qu 16 to 20** }

16. We need to perform chemical reactions with great care and attention in order to avoid any serious accidents. Which part of Anojan's experiment makes serious concern?

- a. Using a gas b. Using a strong acid c. Using a balloon d. all of them

17. Student called Lathu was also taking part in this experiment and asked Anojan that DO use marble in powdered form, instead of solid cubes. What would the main reason be for this request?

- a. To avoid danger b. To avoid wastage c. To make reaction slow d. To make reaction fast

18. Marble used in this experiment is obtained from,

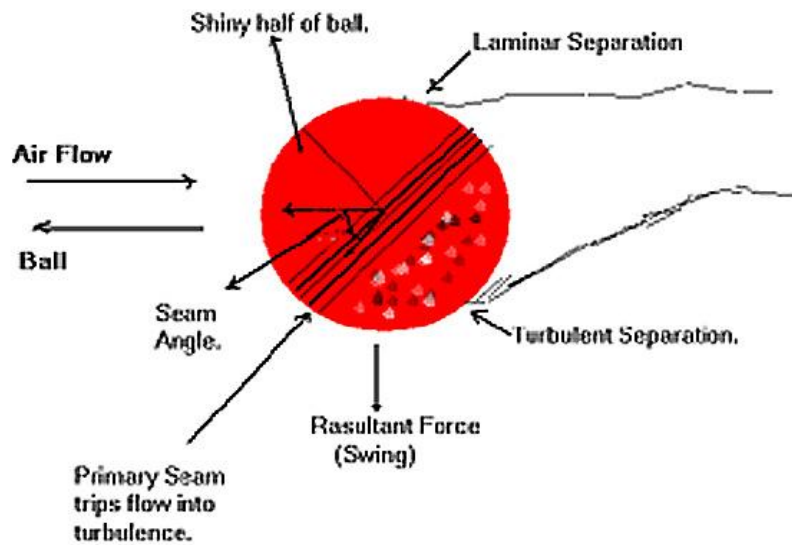
- a. Igneous rock b. Sedimentary rock c. Metamorphic rock d. None of them

19. Identify the gas obtained into the balloon used in this experiment?

- a. CO_2 b. H_2 and CO_2 c. H_2 d. CO_2 and H_2O

20. In this experiment students had used chemical balance to measure weight of chemicals they used. Why did they use chemical balance and what is the core purpose of this experiment respectively?

- a. precise & to show mass is same b. accurate & to show mass is not same c. reliable & to show mass is same
d. portable & to show mass is same



{Every year, SMM (Sciencemathsmaster) is conducting a summer sports day of cricket for students. Students who got interested in cricket mainly are taking part in this sports event and showing their talent and sport loyalty. And also some students are learning cricket with bit of physics. **Fig.5:** Cricket ball and forces involved when it is in air. Source: internet.) Use this information to answer **qu.21 to 25.**}

21. Why cricket ball is mainly made of in red colour?

- a. To show it is danger
- b. To increase visibility as red is long wave length visible light
- c. to make it attractive
- d. b and c

22. Mass of a cricket ball is approximately 150 g; what is the weight of the ball? ($w = m \times g$ where g is gravity of earth 10m/s^2)

- a. 1500 N
- b. 150 N
- c. 1.5 N
- d. none of them

23. A bowler throws a ball at the speed of 6 m/s at the bowling-end, thus what is kinetic energy of the ball and where it is gained from? (**Kinetic energy (KE)** of a ball is given by $0.5 \times \text{mass of ball} \times \text{speed}^2$)

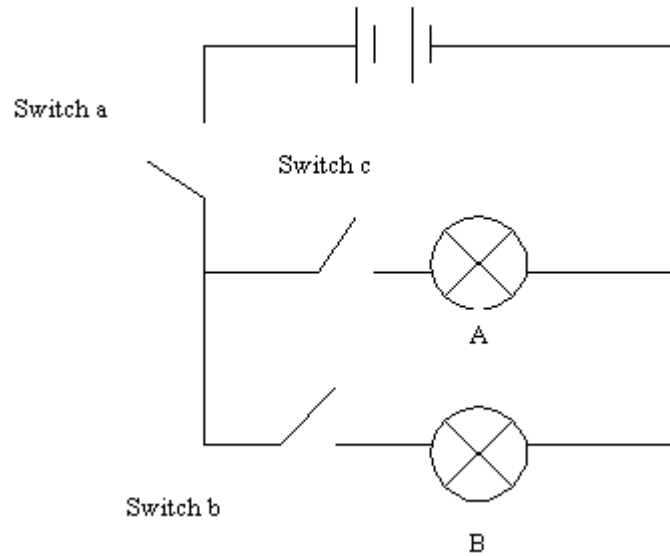
- a. 2.7 J/ chemical energy of bowler
- b. 2700 J/ muscle contraction
- c. 450J/ muscle and KE of bowler
- d. 2.7 J chemical and KE of bowler

24. Name two forces, which slow down the ball while bowler bowling?

- a. air resistance and wind blow
- b. air resistance and acceleration
- c. air resistance and friction
- d. a and c

25. A cricket ball was driven by a batsman at 5m/s constant speed horizontally to reach boundary line via air. (assume air resistance is negligible). The distance between batsman and boundary line approximately 50 m. Find out time taken for ball to reach boundary line?

- a. 250 s
- b. 10 s
- c. 100 s
- d. 25 s



{Fig.6: Shows a circuit diagram. In which a cell has 3V; Resistance of a bulb 2 Ohm) Source: internet. Use this diagram and information to answer qu. 26 to 28}

26. If a cell in the above diagram has 3V potential different and all switches are closed then what will potential different be across bulb A? (Voltage = Current X Resistance)



- a. 3V b. 1.5V c. 6V d. none of them

27. When switches A and B closed what is the current in bulb B? (Bulbs A and B identical and each has 2 ohm resistance)

- a. 6A b.3A c. 1.5 A d. none of them

28. If all switches are closed then what is the current in main circuit near cell?

- a.1.5A b. 6A c.3A d. none of them

Planet	Atmospheric Pressure	Atmospheric Composition	Surface Temperature
	6 - 10 mbar	Carbon Dioxide - 95.32 % Nitrogen - 2.70 % Argon - 1.60 % Oxygen - 0.13 %	-60° C
	1000 mbar	Nitrogen - 75.52 % Oxygen - 23.13 % Argon - 1.29 % Carbon Dioxide - 0.05 %	15° C

(Table.2 shows comparison of Earth and Mars atmospheres. Source internet)

29. Which pair correctly shows units of pressure?

- a. Pa, N b. N/m², Pa c. Nm, Pa d. none of them

30. Student called Puvi has designed a Mars probe with his own interest. He made probe with a larger parachute than the one commonly used on Earth. What is the main purpose of designing larger parachute in Mars probe?

- a. Mars is larger than earth b. Mars has less gases in atmosphere c. Mars has more gases in atmosphere
d. Earth pulls Mars stronger

END of TEST

*** Student who gets 90% or above in this paper, will get a valuable educational gift. ***

Student's comment:-----

Parent's comment:-----

Signature of Teacher:-----

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