

## Model Question of JSC Exam 2014

## Subject: Science

Time: 2 Hours 10 Minutes

Full Marks: 60

(Answer any 6 questions from the following questions)



Fig: A

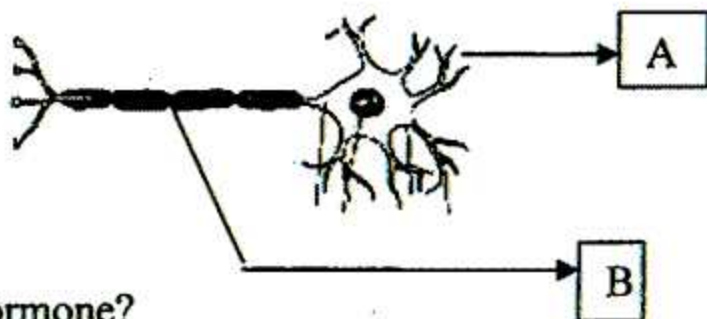


Fig: B

1. Above figure shown, two different animals of different phylum. Now answer the following questions:

- Hydra belongs to which phylum? 1
- What is the difference between coelenterons and coelom? 2
- Explain the characteristics of fig: B. 3
- Which animal mentioned above fig: A and B, is more important? Explain. 4

2.



- What is hormone? 1
- Why this cell does not divided like other cell? 2
- Draw a labeling diagram and explain the role of A and B in feelings. 3
- The nature of above cell is different in other normal cells- describe logically. 4

3. i.  $\text{H}_2\text{SO}_4$   
ii.  $\text{NaOH}$   
iii.  $\text{NaCl}$   
iv.  $\text{Al}(\text{OH})_3$

Observe the following compounds and answer the questions.

- a. What is indicator? 1
- b. Why antacid is used when we felt acidity? 2
- c. Compound (i) mentioned above is an acid,-explain. 3
- d. Compound (ii) and (iv) both are base but one of them is alkali-Analyze. 4
4. A man with 70 kg of mass going to the 5<sup>th</sup> floor by using stair. He felt tired. But when again came down stair, he felt weightless.
- a. What is gravity? 1
- b. The value of ' $g = 9.8 \text{ metre/sec}^2$ ' Explain. 2
- c. Calculate the weight of the man? 3
- d. Explain the reasons that changes of the body, mentioned above stem. 4
5. One day, electric accident occurs of Mr. Faruq's house due to short circuit. He called an electrician. After examining, the electrician suggested to use a special electric devise to avoid such type of accident as they use different electric appliances. He also advised not to waste electricity and try to Proper use of it.
- a. What is 1 ohm? 1
- b. Explain ohm's law. 2
- c. Explain about the special electric device that the electrician. Suggested. 3
- d. What steps should be taken by Mr. Faruq to follow the last advice of the electrician? Analyze. 4

6.

Element	Atomic number
A.	11
B.	17

The mass number of element B is 35.

- a) What is the proton number of nitrogen? 1
- b) Write the uses of isotope in medical? 2
- c) Find out the number of proton and neutron of element B. 3
- d. Show the distribution of electrons in element A and B and explain their ability to form bond between them? 4
7. Tipu is five years old. He does not see anything very well. Besides he becomes very sick. His mother took him to doctor. Doctor advised to take milk, small fish, vegetables and different fruits.
- a. What is the name of the disease that Tipu was suffering? 1
- b. What is meant by Roughage? 2
- c. Explain the symptoms mentioned above disease. 3
- d. What will happen in future if Tipu does not eat the food prescribed by the doctor? Analyze. 4

8.

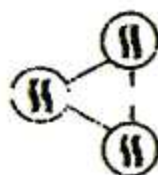


Fig: A

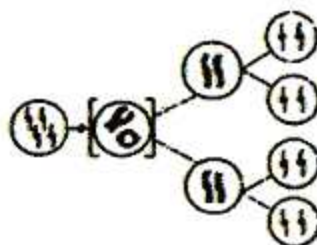


Fig-B: Daughter cell

- a. What type of cell division occurs in yeast? 1
- b. Why mitosis cell is known as division of similarity? Explain. 2
- c. Explain with diagram the longest stage of B presented above. 3
- d. Which one in between fig-A and B, plays an important role for development of somatic cell in multi-cellular organism 4
9. One day Mila was walking in their garden. Suddenly she observed that some seedlings had withered away. She watered the plants. Next morning she found all the plants alive and afresh. In science class, when she wanted to know about this, the teacher, she explained the reason.
- a. What is imbibition? 1
- b. Why is transpiration called the "necessary evil"? 2
- c. Explain the process that the plants become alive? 3
- d. Describe the importance of the process above mentioned for the living organism. 4

## Model Question of JSC Exam 2014

Subject: Science (MCQ)

Time: 40 Minutes

Full Marks: 40

[N: B: Tick (✓) the right answer in the supplied answer script against the serial number of the M.C.Q. Each question carries one mark].

- Which animals have spinous integument?
  - Annelida
  - Arthropoda
  - Mollusca
  - Echlnodermatas
- The longest cell of human body is-
  - Nerve cell
  - axon
  - dendron
  - body cell
- What is the source of unsaturated fatty acids?
  - Sunflower oil
  - Mustard oil
  - Sesame oil
  - Coconut oil
- Which vitamin is to be dispensed along with calcium?
  - Vitamin B<sub>6</sub>
  - Vitamin Bi<sub>2</sub>
  - Vitamin D
  - Vitamin K
- Which one is aggregate fruit?
  - Pineapple
  - custard apple
  - fig
  - jackfruit

Read the following passage and answer the question numbers 6 and 7 :

Pruma planted a money plant in a tub near the window of her room. As the plant grows fast, the twigs and tendrils bend towards the window. She brought the vine inside the room but the same thing happened again.

- Why does Pruma's money plant creep towards the window?
  - Air
  - Water vapour
  - Light
  - Heat
- Enhances the growth of Pruma's money plant—
  - abscisic acid
  - cytokinin
  - gibberellin

Which one of the following is correct?

- i & ii
  - i & iii
  - ii & iii
  - i, ii & iii
- Which one is a tertiary consumer in a pond?
    - Hawk
    - small fish
    - Mosquito larva
    - all of above
  - What does somatic cell produce?
    - Gamet
    - Zygote
    - Pollen
    - Cuticle
  - At what stage the centromeres divide into two?
    - Pro-metaphase
    - Metaphase
    - Anaphase
    - Telophase

- If you want to grow seedless fruits in a few plants, you need to use —.
  - cytokinin
  - auxin
  - gibberellin

Which one of the following is correct?

- i & ii
  - i & iii
  - ii & iii
  - i, ii & iii
- Who is called father of Taxonomy?
    - Carol us Linnaeus
    - John Ray
    - Charles Darwin
    - Alexander Fleming
  - What is the cause of cretinism?
    - hormone deficiency
    - creatinine deficiency
    - enzyme deficiency
    - iodine deficiency

Look at the diagram and answer to the following question numbers 14 — 16 :



- What atom is it?
  - Oxygen
  - Hydrogen
  - Nitrogen
  - Chlorine
- What type of family can the diagram be compared to?
  - Nuclear family
  - Molecular family
  - Joint family
  - Chaotic family
- In this case there will be —.
  - no ionization
  - no radiation
  - no charge

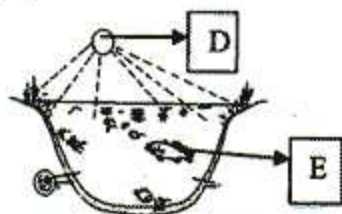
Which one of the following is correct?

- i & ii
  - ii & iii
  - i & iii
  - i, ii & iii
- This case is common to —.
    - hydrogen
    - carbon
    - uranium
- Which one of the following is correct?
- ii & iii
  - i & ii
  - i & iii
  - i, ii & iii
- Which one is the formula of backing soda?
    - Na<sub>2</sub>CO<sub>3</sub>
    - NaCl
    - NaHCO<sub>3</sub>
    - Na<sub>2</sub>SO<sub>4</sub>

19. If the mass of a matter is 60 kg, What will be the mass of it in the moon?  
 a. 40 gm                      b. 60 gm  
 c. 40 kg                      d. 60 kg
20. What is the S.I unit of R ?  
 a. Ohm                      b. Volt  
 c. Ampere                      d. Coulomb
21. Where does the space begin from?  
 a. 130 km above the ground  
 b. 140 km above the ground  
 c. 150 km above the ground  
 d. 160 km above the ground
22. Animals belonging to the phylum Cnidaria—  
 i. can live in all weather conditions  
 ii. live in colonies  
 iii. are free living  
 Which one of the following is correct?  
 a. i & ii                      b. ii & iii  
 c. i & iii                      d. i, ii & iii
23. Which one of the following is an analysis reaction?  
 a.  $H_2 + Cl_2 \rightarrow HCl$   
 b.  $NaOH + H_2SO_4 \rightarrow Na_2SO_4 + H_2O$   
 c.  $KCO_3 \xrightarrow{\text{heat}} KCl + O_2$   
 d.  $Na + H_2SO_4 \rightarrow Na_2SO_4 + H_2$
24. Which part of the brain is called the pedicel of the brain?  
 a. Medulla                      b. Pons  
 c. Diencephalon                      d. Cerebellum
25. Which one of the following is a modified stem?  
 a. Garlic                      b. Sweet Potato  
 c. Yam                      d. Patol
26. Which acid is present in tomato?  
 a. acetic acid                      b. oxalic acid  
 c. citric acid                      d. Tartaric acid
27. Which one is correct about ohm's law?  
 a.  $I = \frac{V}{R}$                       b.  $I = \frac{R}{V}$   
 c.  $R = \frac{V}{I}$                       d.  $I = VR$
28. What is the value of 'g' in polar regions?  
 a.  $9.812 \text{ m/s}^2$                       b.  $9.823 \text{ m/s}^2$   
 c.  $9.832 \text{ m/s}^2$                       d.  $9.821 \text{ m/s}^2$
29. Which is the reddish planet of the solar system?  
 a. the Uranus                      b. the Mars  
 c. the Neptune                      d. the Jupiter
30. During osmosis —.  
 i. semi-permeable membrane is necessary.  
 ii. Solute moves from lower concentration to higher concentration.  
 iii. Solvent moves from higher concentration to lower concentration.  
 Which of the following is correct?  
 a. i & ii                      b. i & iii  
 c. ii & iii                      d. i, ii & iii

31. What is the function of phloem tissue?  
 a. taking water from roots to leaves  
 b. taking food from leaves to other parts  
 c. taking water from leaves to other parts  
 d. promoting stomata transpiration
32. Which one is wind pollinated flower?  
 a. Paddy                      b. Pumpkin  
 c. China rose                      d. Kadam
33. What are the ingredients of calcium hydroxide?  
 a. vitriol and. water                      b. soda and water  
 c. potash and water                      d. lime and water
34. Example of colloidal substances—  
 i. cell wall  
 ii. gelatin  
 iii. cellulose  
 Which one of the following is correct?  
 a. i & ii                      b. ii & iii  
 c. i & iii                      d. i, ii & iii
35. Which one of the following cures any wound/sear in plant body?  
 a. Abscesic acid  
 b. Acetic acid  
 c. Indole acetic acid  
 d. Citric acid
36. What year was the first artificial satellite initiated in the space?  
 a. 1955                      b. 1957  
 c. 1958                      d. 1961

Look at the diagram and answer to the following question numbers 37 and 38 :



37. What type of component D is?  
 a. Biotic component  
 b. Inorganic component  
 c. Organic component  
 d. Physical component
38. What type of consumer E is?  
 a. Primary                      b. Secondary  
 c. Tertiary                      d. decomposer
39. One light year = ?  
 a. 7 million km                      b. 8 million km  
 c. 9 million km                      d. 10 million km
40. Use optical fiber includes —.  
 i. endoscopy  
 ii. proctoscopy  
 iii. colonoscopy  
 Which one of the following is correct?  
 a. i & ii                      b. i & iii  
 c. ii & iii                      d. i, ii & iii