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ANDHRA EDUCATION SOCIETY SCHOOLS  
NEW DELHI  
MID TERM EXAMINATION (2017-18)  
CLASS - IX  
SUBJECT - SCIENCE

Time : 2:30 Hrs.

Max Marks : 80

1Q-2Q carry 1 mark each, 3Q-5Q carry 2 marks each, 6Q-15Q carry 3 marks each, 16Q-21Q carry 5 marks each. 22Q-27Q is of practical's carrying 2 marks each.

1. ✓ Where are proteins synthesised inside the cells?
2. ✓ Explain why some of the leaves get detached from a tree if we vigorously shake its branch.
3. ✓ A racing car has a uniform acceleration of  $4\text{m/s}^2$ . What distance will it cover in 10 seconds after start?
4. (4) What are the functions of areolar tissue?
5. What are the desirable characters of bee varieties suitable for honey production?
6. Give reason for the following observation.
  - a) We can get the smell of perfume sitting several metres away.
  - b) ✓ Water at room temperature is a liquid
7. Derive an equation for distance from velocity time graph?
8. ✓ How does an Amoeba obtain its food?
9. What would happen if there was no golgi complex?
10. Name the following
  - a) Tissue that forms inner lining of the mouth
  - b) Tissue that connects muscle to bone in humans.
  - c) Tissue that transport food in plants
11. Define momentum. A bullet of mass 20g moving with a velocity of 200m/s gets embedded in a wooden block of mass 980g. Calculate the velocity acquired by the block? ( 1+2M )

PTO

12. Give reasons:
- Why does a cricket player lower his hands while catching a ball?
  - Why does a gun recoil when it is fired from a bullet?
  - Why do we fall forward when brakes of a bus are suddenly applied.

13. Explain the following giving examples
- saturated solution
  - colloid
  - suspension

14. Name the technique to separate
- Butter from curd
  - salt from sea water
  - camphor from salt

15. How do you differentiate between capture fishing, mariculture and aquaculture.

16. (i) What is the physical state of water at (a)  $25^{\circ}\text{C}$  (b)  $100^{\circ}\text{C}$   
(ii) Why does our palm feel cold when we put some acetone or petrol or perfume on it?  
(iii) What produces severe burns, boiling water or steam?(2+1+2M)

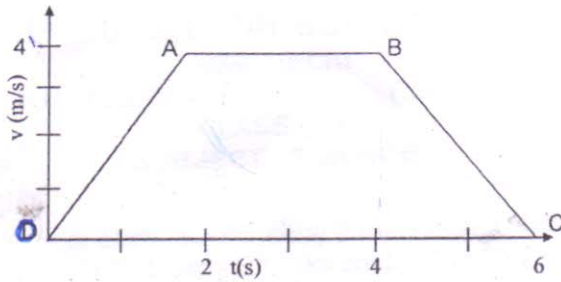
17. State Newton's second law. Obtain the relation  $F = ma$  from it. (3M)

A scooter is moving with an initial velocity of  $90\text{km/hr}$  and it takes 10 seconds to stop it, after the brakes are applied. Calculate the force exerted by the brakes on the scooter, if its mass along with the rider is 200 kg. (2M)

18. Differentiate between the three types of muscle fibres with the help of diagrams (3+2M)

19. From the v-t graph answer the following questions:

- What type of motion does OA, AB, BC represent (1/2 each)
- What is the slope of v-t graph called? (1/2M)
- What is the physical quantity that is represented by the area of v-t graph called? (1/2M)
- Find the retardation of the body (1M)
- What is the maximum velocity attained by the body? (1/2M)
- Find the distance travelled by the body in 6 seconds? (1M)



20. a) Differentiate between homogenous and heterogenous mixtures with the help of examples.  
 b) Classify the following into elements, compounds and mixtures sodium, soil, sugar solution, silver, calcium carbonate and tin (2+3M)
21. a) How do biotic and abiotic factors affect crop production  
 b) What are the desirable agronomic characteristics for crop production? (3+2M)

### PRACTICALS

22. Which is a better mounting medium,  $H_2O$  or glycerine to prepare temporary mount of onion peel?
23. Raman observed a permanent slide of a plant tissue under a microscope. He identified it as parenchyma tissue. The diagram was drawn by him. He also wrote its identifying features. What could be the diagram and appropriate reasons for his findings?
24. Why is it advised to rub magnesium ribbon with sand paper before burning it in air?
25. How can a colloidal solution of egg albumin in water be prepared?
26. Which gas is evolved when iron filings and sulphur is treated with dilute sulphuric acid? Which type of smell is emitted by that gas?
27. Sand and naphthalene balls were heated together in a china dish. What substance will be left in the china dish After heating?

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