COMBINED SCHOOLS

FIRST TERM EVALUATION – 2019

| Grade ශ්‍රේණිය] 09 | Subject විෂයය] SCIENCE විද්‍යාව | Paper පත්‍රය] I & II | Time කාලය] 2 hours |

Name/Index No. .... Class : ....

PART – I

Answer all the questions.

(1) What is the unit equal to a pascal (Pa)

    i) $\frac{N}{m^{-2}}$ ii) $\frac{m^{-2}}{N}$ iii) $\frac{N}{m^2}$ iv) Nm

(2) What is the group of micro organism distroyed by antibiotic "Griseofulvin"
    i) Fungi   ii) Bacteria   iii) Protozoa   iv) Virus

(3) An element that can be extracted by bioleaching
    i) Sodium   ii) Magnesium   iii) Copper   iv) Silicon

(4) Not a function of Yeast in yoghurt production
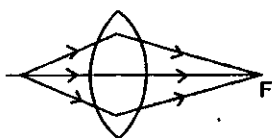   i) Converting Lactose into lactic acid   ii) Act as a preservative agent
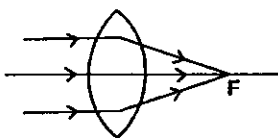   iii) Increase the acidity of the medium   iv) Destroy favourable bacteria
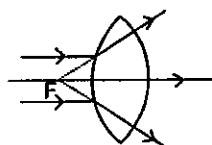
(5) Select the correct ray diagram of showing the focal point of a convex lens
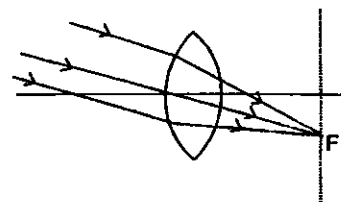

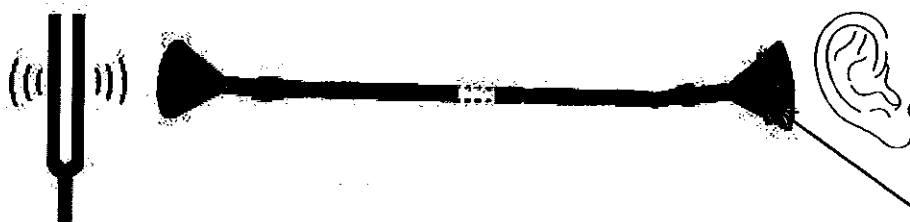   (a)   (b)   (c)   (d)

    i) a   ii) b   iii) c   iv) d

(6)

Balloon membrane

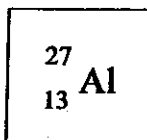Objective of above practical is to,
    i) All the Sounds of the air can be obtained by human ear.
    ii) Vibration is important for origin of a Sound
    iii) 20Hz to 20000Hz Vibrations can be heard by a human ear.
    iv) Sound can be heard by ear.

Standard representation of atomic number and mass number of an element is given bellow.

$$_{13}^{27}\text{Al}$$

Answer the 7, 8 and 9 questions using above representation

(7) Atomic number of given element is

    i) 27   ii) 13   iii) 40   iv) 14

(8) Number of neutrons of the given element is

    i) 27   ii) 15   iii) 40   iv) 14

(9) Number of protons and electrons in order

    i) 27,13   ii) 13,14   iii) 14,13   iv) 13,13

(10) What is the correct statement according to the planetory model ?

    i) Sub atomic particle "electrons" are spread in large space and protons and neutrons are limited to small space nucleus.

    ii) All sub atomic particles are bound together

    iii) Electrons and protons spread in large space and neutrons restricted to the neucleus.

    iv) Matter consist of very small particles which cannot be devided further.

(11) Which of the following is a non pure substance (mixture)?

    i) Water   ii) Sault solution

    iii) Copper sulphate   iv) Carbon dioxide

(12) An answer only with vector quantities

    i) Force and Distance   ii) Time and Pressure

    iii) Weight and Force   iv) Mass and Pressure

(13) What is the pressure exerted by 200 N an unbalance force of 200N acts on $5m^2$ area,

    i) $200N \times 5m^2$ ii) $\dfrac{200N}{5m^2}$ iii) $\dfrac{5m^2}{200N}$ iv) $\dfrac{1}{200N \times 5m^2}$

(14) What is the correct path of light ray enter into the eye travels to retina?

    i) Cornea → lens → Aqueous humour → Pupil → Vitreous humour → lens

    ii) Cornea → Pupil → Vitreous humour → lens → Aqueous humour → retina

    iii) Cornea → Aqueous humour → Pupil → lens → Vitreous humour → retina

    iv) Cornea → lens→ Pupil → Aqueous humour → Vitreous humour

(15) What is the physical method used to extract cinnamon oil from cinnamon leaves?

    (i) Fractional distillation   (ii) Sifting

    (iii) Steam distillation   (iv) Crystallization

(16) An example for a homogenous mixture,

    i)   Dissolving washing blue in water   ii) Dissolving wheat flour in water

    iii) Dissolving coppersulphate crystal in water   iv) Dissolving clay in water

(17) Causative Organism of dengue belongs to group,

    i) Protozoa   ii) Virus   iii) Fungi   iv) Bacteria

(18) What is the symbol of element lead?

    i) Ld   ii) Le   iii) Pb   iv) Pt

(19) An advantage of binocular vision is,

    i) Can decide the distance to an object

    ii) Can decide the distance from retina to an object

    iii) Can decide stereoscopic vision and objective distance

    iv) Can decide the volume of an object

(20) What is the technology used by microorganisms for removing the pollutants from the environment?
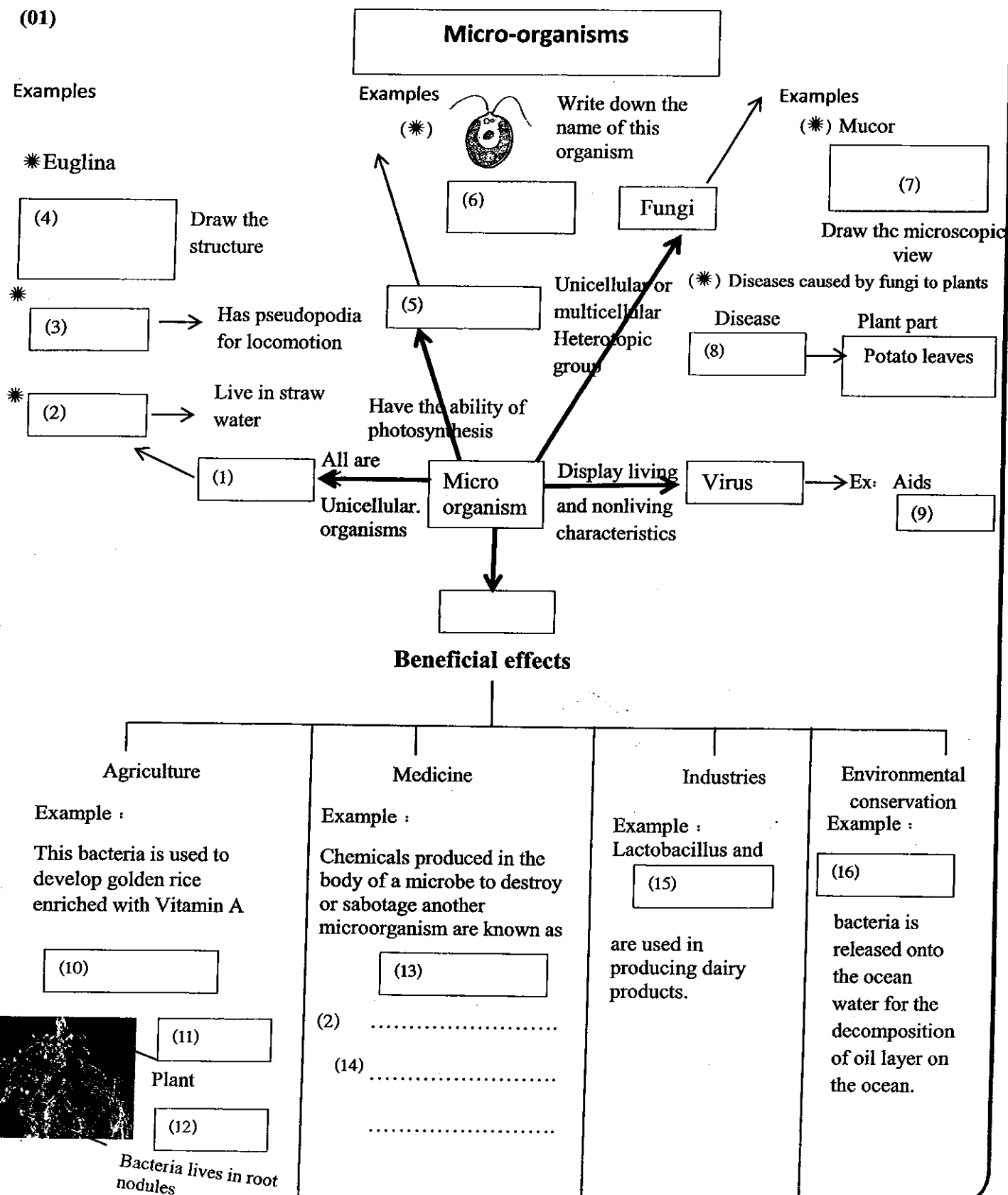
    i) Bio leaching   ii) Bio degradation

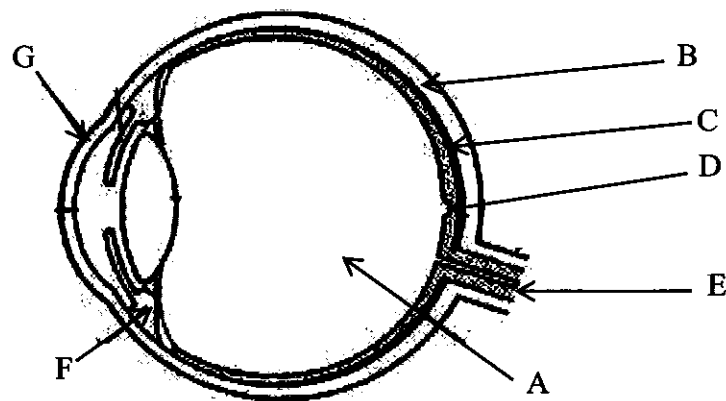   iii) Bio remediation   iv) Bio technology

PART – II

First question is compulsory. Write answers for the first question and four other questions. (Total number of questions to be answered 5)

Question number 1 16 marks	=	16
Other 4 questions 11 x 4	=	44
Total	=	60

(01)

Micro-organisms

Examples

＊Euglina

(4)   Draw the structure

＊

(3) → Has pseudopodia for locomotion

＊ (2) → Live in straw water

(1)   All are Unicellular. organisms

Examples
(＊)   Write down the name of this organism
(6)

Micro organism

Have the ability of photosynthesis

(5)

Fungi

Unicellular or multicellular Heterotopic group

Examples
(＊) Mucor

(7)

Draw the microscopic view

(＊) Diseases caused by fungi to plants

Disease	Plant part
(8)	→ Potato leaves

Display living and nonliving characteristics → Virus → Ex: Aids
(9)

Beneficial effects

Agriculture

Example :

This bacteria is used to develop golden rice enriched with Vitamin A

(10)

(11)

Plant

(12)

Bacteria lives in root nodules

Medicine

Example :

Chemicals produced in the body of a microbe to destroy or sabotage another microorganism are known as

(13)

(2) ....

(14) ....

....

Industries

Example :
Lactobacillus and

(15)

are used in producing dairy products.

Environmental conservation
Example :

(16)

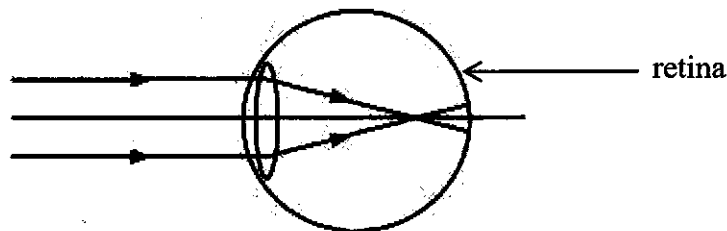bacteria is released onto the ocean water for the decomposition of oil layer on the ocean.

4

(02). Cross section of human eye is given by the figure.

A. (i) Damage of which part of the eye cause glaucoma.
   (ii) What is the sensitive part of the retina, where the sharp image formed?
   (iii) What is the part that helps to change the curvature of the lens, when necessary?
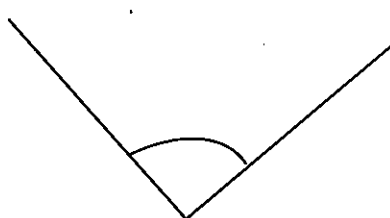
   (1 x 3 =3 marks)

B.

(i)   Identify the above defect of eye.   (01 mark)
(ii) What is the reason of above defect?   (01 mark)
(iii) Draw a diagram to explain how above defect can be corrected using a suitable lens.
                                                                           (03 marks)

C. (a) What is stereoscopic vision?   (01 mark)

   (b)
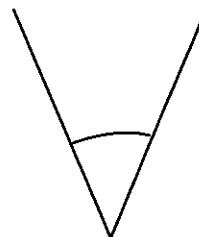
   Range of binocular   Range of binocular
   vision of human   vision of dog

   What is the reason of difference in ranges of binocular vision of human and dog?
                                                                           (01 mark)

   (c) Dog has narrow range of binocular vision. But they have another advantage of it.
        What is it?   (01 mark)

(03). All countries in the world use internationally accepted symbols to indicate elements.

(i) Write down 2 rules of giving above symbol

(01 mark)

(ii) B – Boron
Be – Beryllium
Br – Bromine
Bi – Bismath
Ba – Barium

(iii) What was the complication of giving symbols for above elements? (01 mark)

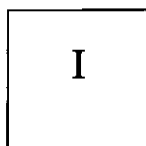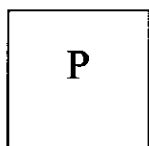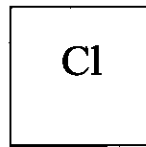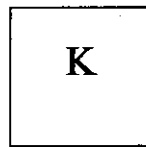(iv) How did they overcome above complication? (01 mark)

(B) Students of grade 9 used following cards for a group activity.

		Hg	S	K	Cl
(a)	(b)				

P	I
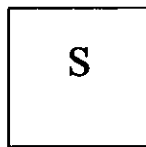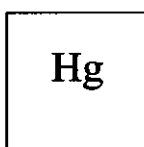
(1) Select the suitable cards

(a) symbol of Potassium.

(b) A gaseous element which form homo atomic molecule.

(c) A chemical found as yellow crystal or powder.

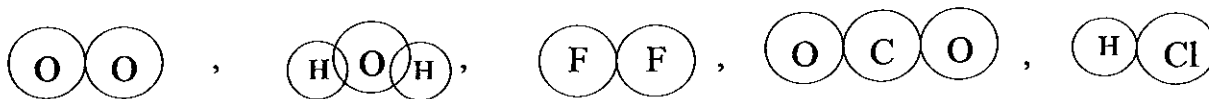(d) 'a' card indicates element 'Aurum' write down its symbol.

(e) 'b' card indicates element Lithium .Write down its symbol.

(1 x 5 marks)

(C) Answer the questions using given molecules.

(i) Separate above molecules as molecules of element and molecules of compounds.
(02 marks)
(ii) Draw the structure of Ammonia molecule.
(01 mark)
(Total 11 marks)

(04). A) Newton balance was fixed to different points of wooden block and same force was applied separately on same direction using a newton balance.
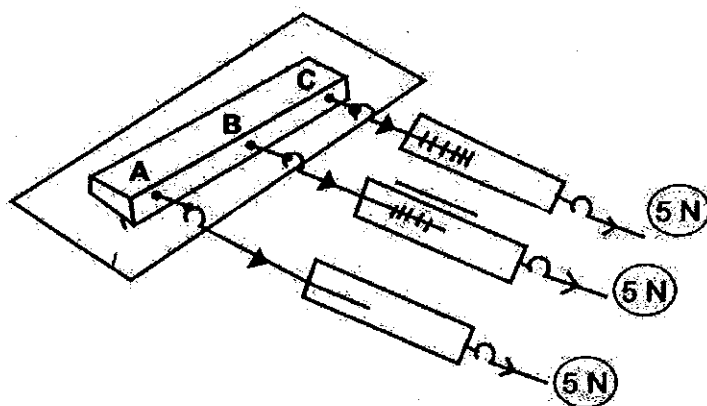
(i) There are some factors effect on a force.
What is the factor demonstrated by above activity? (1 mark)
(ii) Name the two factors effect on force. (2 Marks)
(iii) What are the 3 rules of representing a force? (2 marks)
(iv) Force of 250N acting on a wooden block to the west .Graphically represent the above force.
(2 marks)

B) Physical methods are used to separate mixtures.
(i) What are homogenous mixtures. (1 mark)
(ii) What is the physical method to separate salt from seawater? (1 mark)
(iii) How can you separate the components of sand, sugar, iron power mixture. (2 marks)
(Total 11 marks)

(05). Concept of pressure is applied in day today life.
(i) Define pressure (2 marks)
(ii) Weight of an object kept on a horizontal plane surface is 300N. Pressure exerted by the box on the surface is 5 Pa. What is the contact area of the object? (2 marks)

Following things are supplied to you
A cake of soap, pieces thin wire and thick wire, a sand bag (20N)

(iii) Write down the steps of an activity to demonstrate that pressure change according to the area on which force is acted.
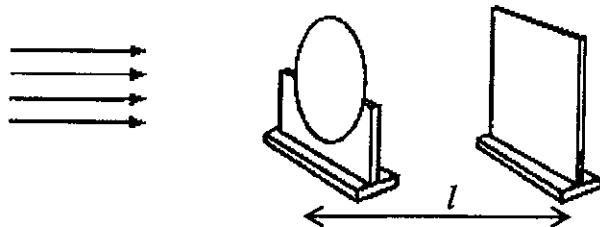Draw the diagram of the activity.
(2 x 2 marks)

(iv) A nail can move on mud but a cart cannot move on mud. Explain scientifically.
(3 marks)
(Total 11 marks)

(06). Short sight can be corrected using convex lens. This can be demonstrated as following steps.
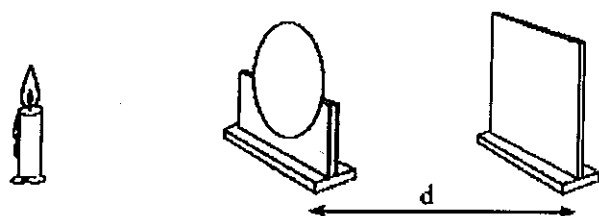
Step I   Obtaining a clear image of distant object on to a screen.
Measure the distance (*l*) between screen and the lens.

a) What is the purpose of measuring *l* distance?   (01 mark)

Step II   Get a clear image of a somewhat far object on to the screen.
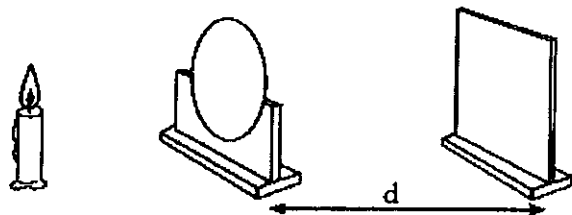
Measure the distance (d) between screen and the lens.

(b) What is the purpose of measuring the distance "d".   (01 mark)

Step III

Light the candle infront of the lens without changing the distance between the lens and the screen. Blurred image was observed.

(c) Lens and screen representing two parts of our eye what are they,
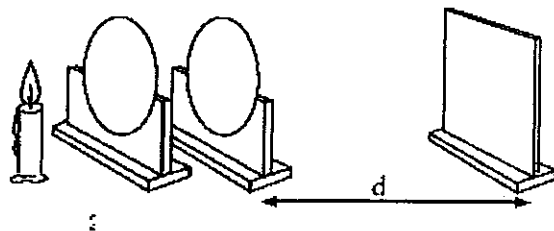Lens –
Screen –
d distance –
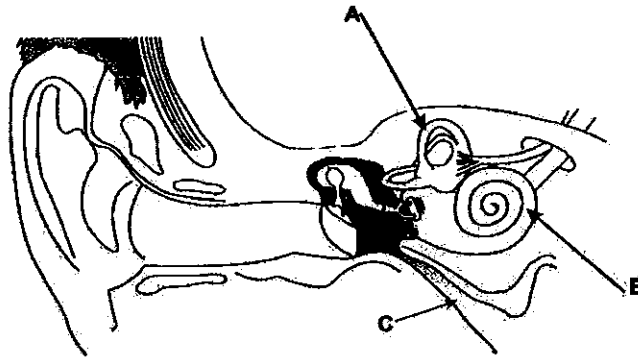
     (03 marks)

Step IV

Place other convex lens between the first lens and the screen. Move it until a clear image of the candle is focused on to the screen.

(d) What is the conclusion he drawn by moving the second lens to obtain clear image on to the screen.   (01 mark)

(B)

(i)   Name A, B and C and state the functions of A.   (04 marks)
(ii) Name a protective measure to protect ear.   (01 mark)

(Total1 11 marks)