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COMMON HALF YEARLY EXAMINATION - DECEMBER 2011

X STANDARD

Reg. No.

Time: 2.30 Hrs.

Science

Marks:75

Section - A

I. Choose the correct answer:

- Fruits of xanthium is 15x1=15 dis*
- 1) Primitive man evolved in _____.
a) Africa b) America c) Australia d) India *a. Amer*
b. Ant
 - 2) Normal blood glucose level in 100 ml of blood is _____.
a) 80 - 100 mg b) 80 - 120 mg c) 80 - 150 mg d) 70 - 120 mg
 - 3) If a water soaked seed is pressed, a small drop of water comes out through _____.
a) stomata b) Lenticel c) micropyle d) radicle
 - 4) Pick out an animal which has four chambered stomach
a) elephant b) Dolphin c) Deer d) Kangaroo
 - 5) The autotrophic nutrition requires _____.
a) CO_2 and water b) chlorophyll c) sunlight d) all the above
 - 6) A solution in Test tube A is transparent. Then the solution is _____.
a) Colloidal solution b) True solution c) suspension d) None
 - 7) Atom of different element with same mass number but different atomic number is called _____.
a) isotopes b) isotone c) isobar d) None of these
 - 8) Chemical volcano belongs to _____.
a) Combination reaction b) decomposition reaction
c) displacement reaction d) Double displacement reaction
 - 9) An amalgam is an alloy of metal with _____.
a) Carbon b) Gold c) Mercury d) Silver
 - 10) Number of elements in the fourth period is _____.
a) 8 b) 18 c) 2 d) 32
 - 11) The weight of 5 kg person at the surface of earth is _____.
a) 5N b) 50N c) 49N d) 490 N
 - 12) Which surface absorbs more heat than any other surface under identical conditions?
a) White b) Rough c) black d) Yellow
 - 13) An electric bulb is connected to a 220V generator. The current is 0.50A. The power of the bulb is _____.
a) 11 W b) 440 W c) 110 W d) 44 W
 - 14) The magnification produced by a mirror is $\frac{1}{3}$, then the type of mirror is _____.
a) Concave b) convex c) Plane d) non of these
 - 15) For spherical mirror, the radius of curvature is equal to _____ the focal length.
a) Half b) Thrice c) twice d) four times

Section - B

20x2=40

II. i) Short answers.

ii) Answer any twenty questions.

16) Match:-

- | | | |
|---------------|---|------------------|
| a) Bat | - | Social animal |
| b) Kangaroo | - | Thick Skin coats |
| c) Polar bear | - | Marsupial |
| d) Man | - | Clicking sound |

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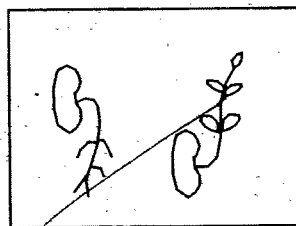
23/ Draw the structure of neuron and label any two parts

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X - Science

- 17) In balsam plants the seed fall off far away from the mother plant.
- Is this statement correct or incorrect?
 - Give reason.
- 18) One of the following groups contains a non mammalian animal. Pick up the group
- Dolphin, Walrus, Porcupine, Rabbit, bat.
 - Elephant, Pig, Horse, Donkey, Monkey
 - Antelope, Deer, Cow, Buffalo, Black buck
 - Dog, Cat, Crocodile, lion, Tiger.

19)



your friend
a swelling in
neck what
will you
in to identify

Observe the above diagram.

- Mention the type of movements shown in figure A and B. *thymoid*
- How does the movement differ from the movement of mimosa. *a*

- 20) Sexually reproducing organisms produce offsprings with marked, significant and visible variation.

A sexually reproducing offsprings show minor variations.

- Do you agree with the above statements?
- Among the following organisms list out the asexually reproducing organisms [Paramecium, Euglena, Earthworm and Bird]

- 21) This diagram is human brain, and the functions of different parts are given below

- Seat of Smell
- Seat of Vision



Mark A and B in the parts of the brain, corresponding with the function.

- 22) Marasmus and kwashiorkor are both protein deficiency defects. Marasmus differs from kwashiorkor in enlarged belly and swelling in the face. Are these symptoms for the above diseases correct? If not, correct it.

- 23) In human beings air enters into the body through _____ and moves into _____. In fishes water enters into the body through _____ and the dissolved oxygen in water diffuses into _____.

- 24) You suspect your friend is suffering from common cold. What are the questions you will put forth to confirm the disease? a) _____? b) _____?

- 25) Draw and label any two parts of Gynoecium.

- 26) Sugar is converted into alcohol. From the above statement what kind of process takes place? Which microorganism is involved? *The fermenting yeast*

- 27) Mendel has observed Tallness as dominant character in Garden pea plant. Similarly tongue rolling is a dominant character in man. In a group of 60 students 45 can roll their tongue and 15 are non rollers.

- In the above context, calculate the percentage of dominant and recessive characters.
- In Garden pea plant, draw the diagrammatic representation of monohybrid cross as explained by Mendel.

- 28) What are the different agents of seed dispersal?

- 29) Pick out the item which has sequential arrangements?

- Zygotene → Leptotene → Pachytene → Diplotene → Diakinesis
- Diakinesis → Zygotene → Leptotene → Pachytene → Diplotene

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c) Leptotene \rightarrow Zygotene \rightarrow Pachytene \rightarrow Diplotene \rightarrow Diakinesis

30) Redraw the diagram and label the following parts.

- a) Exine b) Tube Nucleus



31) Iron nails are dropped into copper sulphate solution. What do you observe. Give reasons.

32) Moseley gave the modern periodic law. What is the modern periodic law?

33) Find the number of moles in 12.046×10^{23} atoms of copper.

34) Match the following:-

- a) Solid solute + gaseous solvent - cheese
 b) Liquid solute + gaseous solvent - Soda water
 c) Liquid solute + solid solvent - smoke
 d) Gas solute + Liquid solvent - cloud

35) Correct the error in the following statement. A reaction between NaOH and HCl is an elimination reaction.

36) Solution of Sulphur is CS_2 is _____ (aqueous, nonaqueous).

An example of saturated solution in nature is
 (Helium - Oxygen mixture / Nitrogen in earth soil)

37) $\text{Fe}^{2+} \rightarrow \text{Fe}^{3+} + e^-$ -----1

$\text{Fe}^{3+} + e^- \rightarrow \text{Fe}^{2+}$ -----2

Reaction (1) is Oxidation, Reaction (2) is Reduction.

Differentiate Oxidation, Reduction.

38) Fill in the blanks:

- a) Force = mass \times acceleration then momentum = _____ \times _____
 b) Liquid Helium is for MRI, then _____ is for rocket.

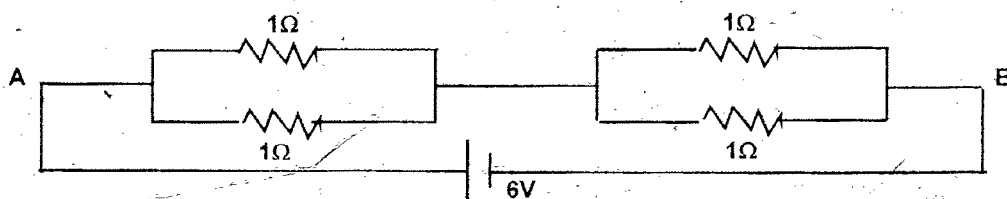
39) Correct the mistakes, if any, in the following statements:

- a) One newton is the force that produces an acceleration of 1 ms^{-2} in an object of 1 gram mass.
 b) Action and reaction is always acting on the same body.

40) Match the following:-

- a) Potential difference - Coulomb
 b) Electric Power - Volt
 c) Electric charge - Kilowatt hour
 d) Electric energy - Watt

41) Observe the circuit given below and find the resistance across AB.



42) From the following statements write down that which represent Ohm's law.

- a) Current / Potential difference = constant
 b) Potential difference / current = constant
 c) Current = resistance \times Potential difference.

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- 43) The focal length of a concave lens is 2m. Calculate the power of the lens.
 44) When a thick glass slab is placed over some printed matter the letter appear raised when viewed through glass slab. Why?
 45) Find the odd one and give reason.
 Torch, Search lights, Vehicle head light, Vehicle rear view mirror

Section - C

4×5=20

- Note: i) Answer any four questions by choosing one question from each group.
 ii) Each question carries five marks.
 iii) Draw diagram wherever necessary.

Group - A

- 46) Human evolution has a record of changes for the past of 15 million years.
 a) Name the different species of mankind in Chronological order from primitive to modern man.
 b) When were the primitive caves developed?
 c) Narrate the life led by early man like hominids.
 47) There is a widespread outbreak malaria in your area.
 a) Suggest some controlling measures to the local authorities concerned.
 b) Pick out the right symptom for Malaria.
 (Chill and Shiver and a rise in temperature / diarrhoea)
 48) Compare aggregate fruit with multiple fruit with suitable examples.
 49) Describe the structure of dicot seed.

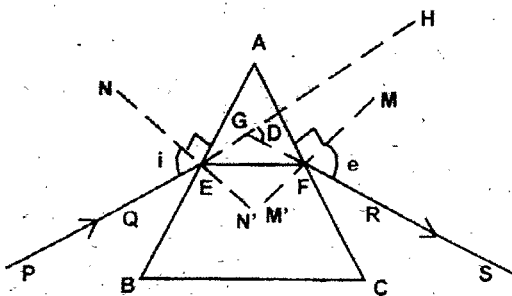
Group - B

- 50) a) When iron is exposed to moist air rust is formed. Write two methods of preventing corrosion.
 b) Bauxite is an ore of aluminium. Clay is a mineral. Differentiate Ore and mineral.
 c) Write two uses of copper.
 51) a) Mole concept is introduced to express the quantity of substance. Define Mole.
 b) Atoms are the building blocks of matter. List out two difference between atoms and molecules.
 c) Find the atomicity of ozone if its atomic mass is 16 and molecular mass is 48.

Group - C

- 52) State and prove law of conservation of momentum.

53)



- a) Label the following in the given diagram given above.
 a) incident ray b) refracted ray c) emergent ray
 d) angle of refraction e) angle of deviation f) angle of emergence
 b) Write two difference between myopia and hypermetropia.
