Diploma, Anna University-UG, PG., HSC & SSLC

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| | | The second second | | 1 |
|---|---|---------------------------|----------------------------|------|
| | COMMON FIRST RE | VISION TEST - | 2020 | 1 |
| IC A | COMMON FIRST NE | ard X | | 1 |
| KA | SCIE | NCE | Marks: 7 | 5 |
| Time: 3.00 hours | | 1-1 | | |
| | | | 12 x 1 = 1 | |
| | correct answer: erson standing on spring bal | ance, the reading | on it is 65 Kgf. If the ma | in |
| When a per | erson standing on spring bai from the balance, then the m | | | |
| jumps off f | rom the balance, there the | b) first decrease | es and increases | |
| | reases and decreases | d) no change | | |
| c) decrea | ses | | | |
| Which of the control of the | ne following is correct? | al power | | |
| a) rate of | change of charge is electric | ai povici | | |
| b) rate of | change of charge is current | | | |
| a) rate of | change of energy is current | | | |
| d) rate of | change of current is charge | A A CONTRACTOR | | 1 |
| 2 Gamma ti | adiations are dangerous bec | guam | and the state of the | |
| 3. Gaillina i | cts eyes and bones | b) it affects tiss | ues | at |
| | tie disorder | d) it produces e | normous amount of he | at |
| c) it proc | me occupied by 1 mole of a c | hatomic gas at S.T. | Pis | |
| 4. The volu | itre b) 5.6 litre | c) 22.4 litre | d) 44.8 litre | |
| a) 11.21 | to the official day | 10 | | |
| 5. Neon sh | to arrangement of neutrons | D) Stable coming | uration of electrons | |
| a) stab | ced size | d) increased de | ensity | |
| c) redu | f the following is the universa | | | |
| | | c) water | d) alcohol | |
| a) aceto | e of ionic product of water at | | | |
| 7. The value | x 10 ¹⁴ b) 1.00 x 10 ⁻¹⁴ | c) 1.00 x 10 ⁴ | d) 1.00 x 10 ⁻⁴ | |
| a) 1.00 | x 1012 B) 1.00 x 10 | ing photosynthesis | ? | |
| Oxygen | is produced at what point dur | b) When CO is | s fixed | |
| a) Whe | n ATP is converted to ADP | d) All of these | | |
| c) Whe | n H ₂ O is splitted | d) All of triese | and has blood loss. Wh | nich |
| A patien | n H ₂ O is splitted t with blood group O was inju | ired in an accident | sion in this condition? | |
| blood gr | - the dector should effect | VEIV USE TOT LIBITION | JOINTI III UNO GOLIGIE | |
| a) Ogr | | c) A or B group | d) All blood group | |
| 10 LH is se | | | | |
| | nal gland | b) Thyroid glar | | |
| c) Ante | erior pituitary | d) Hypothalam | | |
| 11 The bes | st way of direct dating fossils | of recent origin is t | by . | |
| a) Rad | io-carbon method | b) Uranium lea | ad method | |
| | ssium-argon method | d) Both (a) an | d (c) | |
| c) Pola | oftware is used to create ani | | 10 | |
| | | c) MS Word | d) Scratch | |
| a) Pain | t b) PDF | C) 1013 44010 | u) odalon | |
| 2 | Water State of | 1 10 10 10 | | |
| | | | | |

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(2)

X Science

II. Answer any 7 questions: (Ques.No.22 is compulsory)

 $7 \times 2 = 14$

- 13/Define inertia. Give its classification.
- 14. Why are traffic signals red in colour?
- 15. Mention two cases in which there is no Doppler effect in sound.
- 16/True or False: (If false, give the correct statement)
 - a) Silver metal can displace hydrogen gas from nitric acid.
 - b) On dipping a pH paper in a solution, it turns into yellow. Then the solution is
- 17. Name the simplest ketone and give its structural formula.
- 18 What organs are attached to the two bronchi?
- 14. Match the following hormones with their deficiency states.

Hormones

Disorders

- a) Insulin
- Acromegaly
- b) Parathormone
- Tetany
- c) Growth hormone Diabetes insipidus
- Diabetes mellitus
- 20. What will happen if you cut planaria into small fragments?
- 21. Define living fossils. Give example.
- 22. Calculate the resistance of a conductor through which a current of 3 A passes, when the potential difference between its ends is 30 V.

Part - III

III. Answer any 7 questions: (Ques.No.32 is compulsory)

- 23. Deduce the equation of a force using Newton's second law of motion.
- 24\(\)a) The eyes of the nocturnal birds like owl are having a large cornea and a large pupil. How does it help them?
 - b) Differentiate Myopia and Hypermetropia.
- 25. a) State Joule's law of heating.
 - b) What are the advantages of LED TV over the normal TV?
- 26. Derive the relationship between relative molecular mass and vapour density.
- 27. An organic compound 'A' is widely used as a preservative and has the molecular formula C2H5O2. This compound reacts with ethanol to form a sweet smelling compound 'B'.
 - i) Identify the compound 'A'
 - ii) Write the chemical equation for its reaction with ethanol to form compound 'B'.
 - iii) Name the process.
- 28. How nerve impulses are transferred from one neuron to next neuron?
- 29. How do you differentiate homologous organs from analogous organs?
- 30.\a) Differentiate Aerobic and Anaerobic respiration.
 - b) Draw and label the structure of chloroplast.

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X Science

31. What is the role of fat in the cause of atherosclerosis?

32. a) A radon specimen emits radiation of 3.7 x 103 GB, persecond. Convert this disintegration in terms of Curie (One Curie = 3.7 x 1010 disintegration per second)

b) Lemon Juice has a pH 2, what is the concentration of H ions?

Part - IV

IV. Answer all the questions:

 $3 \times 7 = 21$

(Draw diagrams wherever necessary)

- 33. a) i) Explain the experiment of measuring the real and apparent expansion of a liquid with a neat diagram.
 - ii) If you keep ice at 0°C and water at 0°C in either of your hands, in which hand you will feel more chillness? Why?

- b) i) A source producing a sound of frequency 500 Hz is moving towards a listener with a velocity of 30 ms⁻¹. The speed of the sound is 330 ms⁻¹. The speed of the sound is 330 ms. What will be the frequency heard by listener?
 - ii) The ratio of masses of a two planets is 2:3 and the ratio of their radii is 4:7. Find the ratio of their accelerations due to gravity.
- 34. a) i) Calculate the number of water molecule present in one drop of water which weights 0.18 g.
 - ii) Calculate the number of moles in 46 g of sodium.
 - (iii) Calculate the gram molar mass of CO,

- - Write notes on
 - 1) Saturated solution
 - 2) Unsaturated solution
 - ii) In what way hygroscopic substances differ from deliquescent substance.
- 35. a) i) How does locomotion take place in leech?
 - ii) Why are leucocytes classified as granulocytes and agranulocytes? Name each cell and mention its functions.

(or)

- How is the structure of DNA organised? What is the biological significance of DNA?
 - List any three activities based on 3R approach to conserve natural resources.