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REGIONAL OFFICE VARANASI
SUMMATIVE ASSESSMENT II 2014-2015

CLASS-X

MAX. MARKS-90

SUBJECT-science

MAX. TIME-3 hrs.

General Instructions :

- (i) *The question paper comprises of two Sections, A and B. You are to attempt both the sections.*
- (ii) *All questions are compulsory.*
- (iii) *There is no choice in any of the question.*
- (iv) *All questions of Section-A and all questions of Section-B are to be attempted separately.*
- (v) *Question numbers 1 to 3 in Section-A are one mark questions. These are to be answered in one word or in one sentence.*
- (vi) *Question numbers 4 to 6 in Sections-A are two marks questions. These are to be answered in about 30 words each.*
- (vii) *Question numbers 7 to 18 in Section-A are three marks questions. These are to be answered in about 50 words each.*
- (viii) *Question numbers 19 to 24 in Section-A are five marks questions. These are to be answered in about 70 words each.*
- (ix) *Question numbers 25 to 33 in Section-B are multiple choice questions based on practical skills. Each question is a one mark question. You are to select one most appropriate response out of the four provided to you.*
- (x) *Question numbers 34 to 36 in Section-B are explanatory questions based on practical skills. Each question is a two marks question.*
- (xi) *The question paper contains value based question to the extent of 3-5 marks.*

SECTION A

- Q1. State Mendeleev's periodic law. 1
- Q2 . Define refractive index of a medium . 1
- Q3. In a food chain comprising, tiger, Plants and Goat, among these which will
- a) Transfer the maximum amount of energy to the next tropic level.
 - b) Receive the minimum amount of energy. 1

Q4. Write two advantages of vegetative propagation in plants. 2

Q5. How river Ganga is polluted? (Write any two causes.) 2

Q6. Differentiate between homologous organs and Analogous organs and give one example of each. 2

Q7. Draw the electron-dot structures for the following compounds:

a) Ethanoic acid b) propanone c) Methanal 3

Q8. a) Identify the parts 1,2,3, and 4 of the diagram given below.



b) List two changes that can be observed in the flower, after fertilization. 3

Q9. An object is placed at a distance of 15 cm from a convex mirror of focal length 30 cm. Find the position and the nature of the image. 3

Q10. Identify the elements to complete the table. 3

Period	Group	Element	Metal or Non metal
1	18		
2	2		
3	15		

Q11. In a Mono hybrid cross between a white flowered plant and pink flowered plant, the F₁ generation was

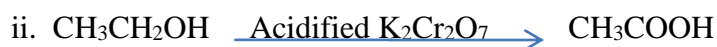
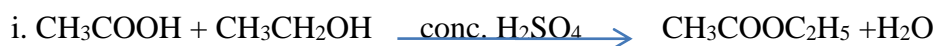
pink. Answer these :

- a. Which are the dominant and the recessive traits ?
- b. Represent the gene combination for the parental plants.
- c. If the F₁ plants are selfbred what will be the ratio of the pink and white Flowers? 3

Q12. Define Tyndall effect and Give reasons for the following.

- a- The colour of sky is blue.
- b- Danger signals are made of red colour. 3

Q13. What is the role of chemicals written on the arrow in the following reaction ?



Q14. Explain with examples the three methods of contraception. 3

Q15. What is Power of a lens? Write its SI unit.

Focal length of concave lens is 20 cm. What is its power? 3

Q16. Amongst the elements A, B and C with atomic number 9,12,10 respectively. Identify the element which is-

- a. Highly electronegative in nature.
- b. An inert gas in nature.
- c. Highly electropositive in nature. Give one sentence reason in support of your answer. 3

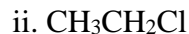
Q17. Mother is responsible for the sex of her baby. Is this statement right? If not why? 3

Q18. Describe the formation of rainbow with the help of a diagram. 3

Q19a. Complete the following chemical equation:-



b. Write the IUPAC name of the following



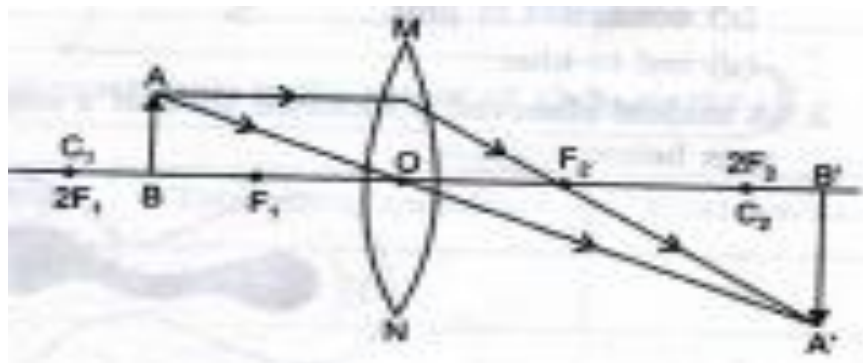
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Q20 . Draw the labeled diagram of male reproductive organs of human ?

Write the functions of prostate gland and seminal vesicles.

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Q21. Study the ray diagram given below and answer the following questions.



i) State the type of lens used in the figure.

ii) Is it converging or diverging lens?

iii) Define principal focus of this lens.

iv) List two properties of the image formed.

v) In which positions of the object , will the magnification be -1?

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Q22. You have studied about various natural resources as Mother-nature's gift to sustain life on planet. You also know about the threats that various resources such as air, water, land, forest etc. are facing and about the efforts of different world governments and international agencies to make the environment safe.

- What role do you and your family members can play by regulating the daily use of some of these (water, electricity) important resources. (any3)
- Why do we need to conserve natural resources?
- What values are associated in conserving them?

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Q23. a)What are Fossils? What do they tells us the process of evolution? What evidence do we have for the origin of life from inanimate matter?

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Q24. What is Far-sightedness? Give two causes leading to this defect of the eye. Draw ray diagrams to show the image formation in case of eye with such defects and corrected eye.

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SECTION B

Q25. The completion of saponification reaction is marked when

- a) Red litmus turns blue.
- b) Red litmus turns colourless.
- c) Blue litmus turns red.
- d) blue litmus turns colourless.

Q26. Amoeba reproduces asexually by

- a) regeneration
- b) budding
- c) binary fission
- d) spore formation

Q27. A student performs an experiment to find the focal length of a concave mirror. He obtains the sharp image of a distant tree when the distance between the concave mirror holder and the screen holder is 26.8 cm. the focal length of the concave mirror is

- a) 26.8 cm
- b) 26.8mm
- c) 13.4 cm
- d) 53.6cm

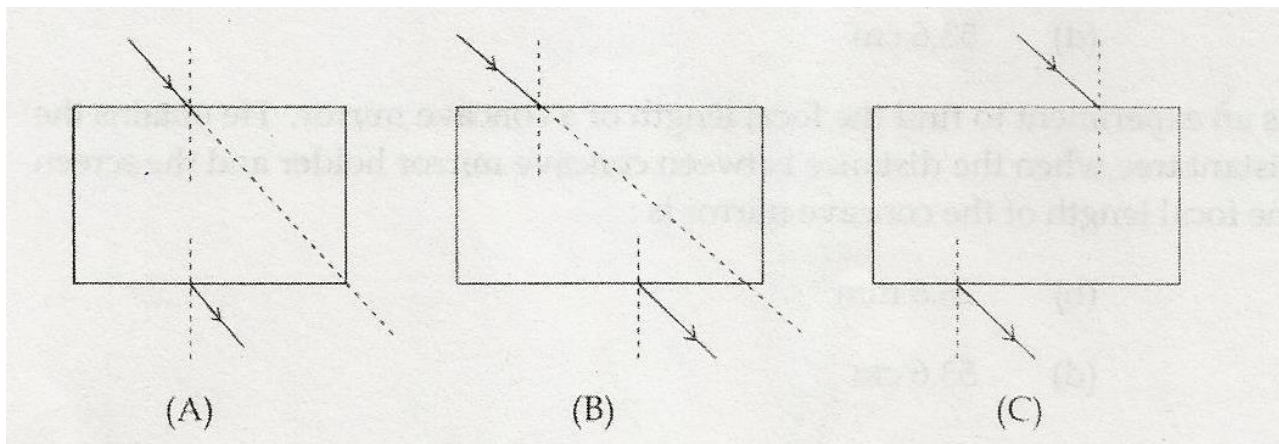
Q28. Tinoo took two test tubes containing rain water and marked them I, II. She dissolved sodium chloride in test tube I and calcium chloride in test tube II. Which of the above options hold good for the above mentioned conditions.

- (a) Water in test tube I will be soft while in test tube II will be hard.
- (b) Water in test tube I and II both will be hard.
- (c) Water in test tube I and II both will be soft.
- (d) Water in test tube I will be hard while in test tube II will be soft.

Q29. One of the example of two analogous organs can be the wing of parrot and

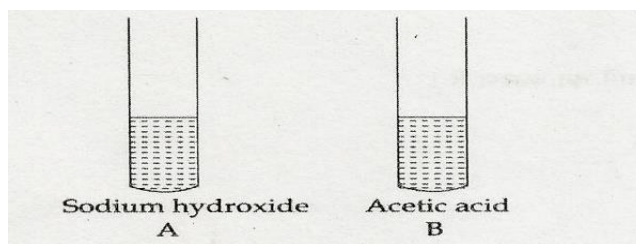
- a) flipper of whale
- b) Foreleg of horse
- c) front leg of frog
- d) wings of housefly

Q30. Three students A,B and C traced the path of a ray of light trough a rectangular glass slab as shown. The correct path is traced by:



- (a) A only (b) B only (c) C only (d) Both A and B

Q31. Puneet made a setup as shown in the figure below. Observe it carefully and answer the question which follows:



If blue litmus is added to both the solutions the result will be

- a) It becomes purple in test tube A
 b) It turns red in test tube A
 c) It turns red in test tube B
 d) In both A and B, there is no colour change
- Q32. To trace the path of ray of light through a triangular glass prism, a student mostly observe that the emergent ray has
- (a) bent away from the base of the prism
 (b) bent towards the base of the prism
 (c) moved perpendicular to the direction of incident ray

(d) gone perpendicular to incident ray.

Q33. A student obtains a blurred image of an object on a screen by using convex lens. In order to obtain a sharp image on the screen he has to shift the screen

(a) towards the screen.

(b) away from the screen.

(c) either towards or away from the lens depending on the position of the object.

(d) in a position very far away from the lens.

Q34. Why is common salt added in the preparation of soap?

Q35. What is the function of cotyledons in a seed? How is Bean seed different from maize seed on the basis of number of cotyledons?

Q36. List two factors on which angle of deviation of prism depends?
