

AMITY INSTITUTE

FOR COMPETITIVE EXAMINATIONS

Delhi Centres: • E-23, Defence Colony, New Delhi - 110024. Ph.: 011-24336143/44, 24331000-02.
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AMITY FIVE YEARS CONCEPTUAL PROGRAMME

MODULE TEST-III

CLASS - X

SCIENCE

Time: 1 hour 15 Minutes

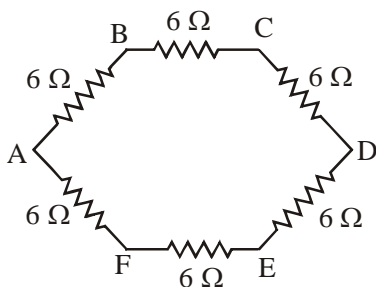
Date: 27.01.2017

Maximum Marks: 180

GENERAL INSTRUCTIONS:

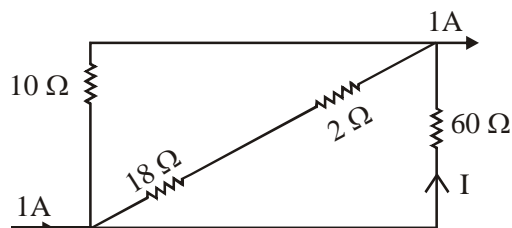
1. Fill in the response sheet with your Name, Class, School etc, in the respective columns, using a blue pen
2. Only one choice (a), (b), (c), (d) is correct for each question. Shade the alphabet of your choice in the response sheet.
3. For each correct response you will get **4 marks**; for each incorrect response you will lose **1 mark**. However if the question is unanswered no marks will be deducted.
4. Use only HB pencil/Ball point pen for Shading.

1. Net resistance between A & D is :



- (a) 9Ω (b) 8Ω (c) 5Ω (d) 1Ω

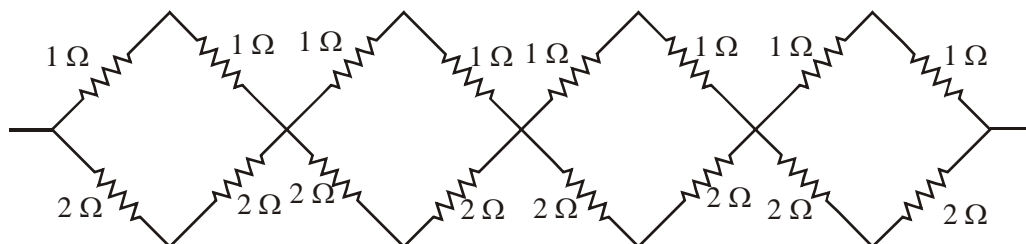
2. The magnitude of current I in ampere in the given circuit is :



- (a) 0.01 (b) 0.1 (c) 0.2 (d) 0.3

3. A 2cm tall object is kept at a distance of 15cm from a concave mirror of radius of curvature 20cm, then
- (a) Virtual & erect image of size 4cm is formed 30cm behind the mirror.
 - (b) Real & inverted image of size 4cm is formed 30cm in front of the mirror.
 - (c) Real & inverted image of size 4cm is formed 20cm in front of the mirror.
 - (d) Real & inverted image of size 6 cm is formed 30 cm in front of the mirror.

4. An object is placed at a distance of 0.1m from a converging lens of focal length 0.2m, then
 (a) Real & inverted image of size twice the size of object is formed at a distance 0.2m on other side of lens.
 (b) Real & inverted image of size half the size of object is formed at a distance of 0.2m on other side of lens.
 (c) Virtual & erect image of size half the size of object is formed at a distance of 0.2m on same side of lens.
 (d) Virtual & erect image of size twice the size of object is formed at a distance of 0.2m on same side of lens.
5. Which device will always give a virtual & diminished image?
 (a) Concave mirror (b) Convex mirror (c) Concave lens (d) Both (b) & (c)
6. A concave lens of focal length 0.15m and a convex lens of focal length 0.40 m are placed in contact, then power of the combination is
 (a) + 4.16 D (b) + 0.16 D (c) - 4.16 D (d) - 0.16D
7. A person uses spectacles of focal length -50cm, the defect of the vision he is suffering from and power of the lens required to correct the defect are
 (a) Hypermetropia, + 2D (b) Hypermetropia, -2D
 (c) Myopia, - 1D (d) Myopia, - 2D
8. Choose the correct option :
 (a) Myopia is corrected by concave lens (b) Hypermetropia is corrected by convex lens
 (c) Hypermetropia is corrected by concave lens (d) Both (a) & (b) are correct.
9. An electron is moving in south direction. It experiences a force in the vertically downward direction, then magnetic field in that region is towards.
 (a) South (b) North (c) East (d) West
10. Lenz's law is a consequence of the law of conservation of
 (a) Momentum (b) Energy (c) Mass (d) Charge
11. Which of the following is most suitable for the core of electromagnet?
 (a) Cu-Ni alloy (b) Steel (c) Soft Iron (d) Air
12. In a nuclear reactor
 (a) Moderator is a substance which slows down the speed of neutrons.
 (b) Moderator is a substance which speeds up the speed of neutrons.
 (c) Commonly used moderators are graphite and heavy water.
 (d) Both (a) and (c) are correct.
13. Two wires are made up of different materials. Their specific resistances are in the ratio 2 : 5, length in the ratio 2 : 3 and area in the ratio 4 : 5. The ratio of their resistances is
 (a) 3 : 1 (b) 1 : 3 (c) 16 : 75 (d) 75 : 16
14. Equivalent resistance of network is :



- (a) 16 Ω (b) 8 Ω (c) $\frac{4}{3} \Omega$ (d) $\frac{16}{3} \Omega$
15. Choose the correct option
 (a) When looking at a far off object, focal length of eye lens increases.
 (b) When looking at a far off object, eye lens becomes thin.
 (c) When looking at a far off object, eye lens becomes thick
 (d) Both (a) and (b) are correct

16. The information that is not conveyed by a balanced chemical equation is :
 (a) Physical states of the reactants and the products.
 (b) Relative amounts of the reactant and the products.
 (c) Mechanism of the reaction
 (d) None of these
17. Which of the following acid present in Rancid butter?
 (a) Oleic acid (b) Stearic acid (c) Uric acid (d) Butyric acid
18. When excess of CO_2 is passed through lime water, then a water soluble salt is formed. the chemical formula of salt is :
 (a) CaCO_3 (b) $\text{Ca}(\text{HCO}_3)_2$ (c) CO_2 (d) $\text{Ca}(\text{OH})_2$
19. Which of the following non-metal has shiny surface?
 (a) Graphite (b) Nitrogen (c) Oxygen (d) Chlorine
20. Is it possible to store copper sulphate solution in a silver container?
 (a) No (b) Yes (c) Can't say (d) Depends upon condition
21. The descending order of ionic radii of Na^+ , Al^{3+} and Mg^{2+} is
 (a) $\text{Mg}^{2+} > \text{Al}^{3+} > \text{Na}^+$ (b) $\text{Na}^+ > \text{Al}^{3+} > \text{Mg}^{2+}$
 (c) $\text{Al}^{3+} > \text{Mg}^{2+} > \text{Na}^+$ (d) $\text{Na}^+ > \text{Mg}^{2+} > \text{Al}^{3+}$
22. The most electronegative element in periodic table is :
 (a) Cl (b) F (c) O (d) N
23. The IUPAC name of compound

$$\begin{array}{c} \text{CH}_3 - \text{CH} - \text{CH}_2 - \text{CH}_2 - \text{OH} \\ | \\ \text{CH}_3 \end{array}$$
 (a) 2-Methyl butanol (b) 3-Methyl butanol
 (c) 2-Methyl butanal (d) 3-Methyl butanal
24. The general formula of alkene is :
 (a) C_nH_{2n} (b) $\text{C}_n\text{H}_{2n+2}$ (c) $\text{C}_n\text{H}_{2n-2}$ (d) None
25. The ionization energy of Na, Mg and Al are in the order :
 (a) $\text{Na} < \text{Mg} > \text{Al}$ (b) $\text{Na} > \text{Mg} > \text{Al}$ (c) $\text{Na} < \text{Mg} < \text{Al}$ (d) $\text{Na} > \text{Al} > \text{Mg}$
26. Match the following :
- | Column-I | Column-II |
|---|---|
| A. Electron deficient | (i) Copper |
| B. Reduction by CO | (ii) Rust |
| C. Expanded octet | (iii) PCl_5 |
| D. Reduction by heating | (iv) Hematite |
| E. Iron | (v) BeCl_2 |
| (a) A-(v), B-(i), C-(iii), D-(iv), E-(ii) | (b) A-(v), B-(iv), C-(iii), D-(i), E-(ii) |
| (c) A-(v), B-(ii), C-(i), D-(iii), E-(iv) | (d) A-(i), B-(ii), C-(iii), D-(iv), E-(v) |
27. A salt that contains replaceable hydrogen is :
 (a) Basic salt (b) Acidic salt (c) Normal salt (d) Amphoteric salt
28. Which of the following is mixed salt?
 (a) $\text{FeSO}_4(\text{NH}_4)_2\text{SO}_4 \cdot 6\text{H}_2\text{O}$ (b) $\text{CH}_3\text{COONH}_4$
 (c) Na_2KPO_4 (d) $\text{K}_4[\text{Fe}(\text{N})_6]$
29. **Statement-I** : In the reaction $\text{ZnO} + \text{C} \rightarrow \text{Zn} + \text{CO}$, ZnO is being reduced.
Statement-II : Carbon acts as reducing agent .
 (a) Both statements are true and statement-II is correct explanation of statement-I.
 (b) Both statements are true but statement-II is not the correct explanation of statement-I.
 (c) Statement-I is correct but statement-II is false.
 (d) Both statements are false.
30. Galena is ore of :
 (a) Lead (b) Sodium (c) Iron (d) Silver

31. On seeing good food our mouth waters, this fluid is actually :
 (a) Water (b) Hormone (c) Enzyme (d) None of the above
32. Rajiv was absent in the class because of muscle pain which he claims to be due to excess physical exercise he had done yesterday. This pain is due to :
 (a) Formation of lactic acid (b) Formation of acetic acid
 (c) Formation of Pyruvic acid (d) Formation of Hydrochloric acid
33. Right part of the human heart contains
 (a) Oxygenated blood (b) Mixed blood
 (c) Deoxygenated blood (d) No blood
34. The gap between two neurons is called _____.
 (a) Synapse (b) Synthesise (c) Dendron (d) Axon
35. Involuntary actions including blood pressure, salivation and vomiting are controlled by the _____ in the hind-brain.
 (a) Medals (b) Cerebellum (c) Medulla (d) Cerebrum
36. _____ is a growth inhibitor hormone in plants.
 (a) Auxin (b) Cytokinin (c) Abscisic Acid (d) Gibberellic Acid
37. A fertilized ovule develops into a _____ in an angiosperm plant.
 (a) Seed (b) Fruit (c) Flower (d) Cotyledon
38. Which of the following processes takes place in the figure given below?



- (a) Selective reabsorption (b) Filtration of blood
 (c) Stores urine (d) Conducts urine
39. Which of the following set represents homologous organs?
 (a) Fore limb of a bird and the wing of a bat. (b) Fore limb of a frog, a lizard and a bird.
 (c) The wing of a bat and the wing of a bird. (d) Fore limb of a lizard and the wing of an insect.
40. Which of the following methods is used to produce new rose plants?
 (a) layering (b) Bud grafting (c) Budding (d) Stem cutting
41. Pre-natal sex determination has been prohibited by law due to :
 (a) High cost charged by doctors (b) Possible danger of mother's health
 (c) Increasing cases of female foeticide (d) Increasing cases of male foeticide
42. The direction of impulse in a typical neuron is :
 (a) Axon to dendron (b) Dendron to axon
 (c) Both (a) and (b) are correct (d) Both (a) and (b) are wrong
43. People living in coastal areas suffer less from goiter. This is because :
 (a) They eat sea food (b) They drink sea water
 (c) They bath in sea water (d) All of the above
44. The endocrine organ present in human female but not in human male is :
 (a) Testis (b) Ovary (c) Pituitary gland (d) Thymus
45. If there is a deficiency of growth hormone, the child becomes _____.
 (a) Blind (b) Mentally retarded (c) Giant (d) Dwarf

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MODULE TEST-III

CLASS - X

SCIENCE

A N S W E R S (Date 27-01-2017)

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|---------|---------|---------|---------|---------|
| 1. (a) | 2. (b) | 3. (b) | 4. (d) | 5. (d) |
| 6. (c) | 7. (d) | 8. (d) | 9. (c) | 10. (b) |
| 11. (c) | 12. (d) | 13. (b) | 14. (d) | 15. (d) |
| 16. (c) | 17. (d) | 18. (b) | 19. (a) | 20. (b) |
| 21. (d) | 22. (b) | 23. (b) | 24. (a) | 25. (c) |
| 26. (b) | 27. (b) | 28. (c) | 29. (a) | 30. (a) |
| 31. (c) | 32. (a) | 33. (c) | 34. (a) | 35. (c) |
| 36. (c) | 37. (a) | 38. (b) | 39. (b) | 40. (d) |
| 41. (c) | 42. (b) | 43. (a) | 44. (b) | 45. (d) |

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